PRACTICAL HOME ECONOMICS

FOR TEACHING NUTRITION, FOOD, HYGIENE, CLOTHING, HOME MAKING AND HEALTH.

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CONTENTS

Making the Most of This Number 79

Chemical Yearns .....Pauline Beery Mack 81

Foods Classes for One Hour Periods Doris K. Sutcliffe 84

The Gift of God .....Dorothy G. Spicer 85

Health Education Program ....Margaret Stolzenbach 87

House Furnishing Courses for Today Blanche E. Hyde 89

Projects in Foods and Clothing .....Ruth Beedle 91

The School Lunch 93

Emergency Lunches
Martha Westfall and Josephine Adams 93

The Hot Lunch—a Health Factor ..Dorothy Hanigan 95

Planning Balanced Menus .....Charlotte Peters 96

Abstracts from Current Periodicals 98

Home Economics Exchange 100

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MAKING THE MOST OF THIS NUMBER

In this number we can make only the briefest mention of the meeting just held in Washington of the Department of Supervisors and Teachers of Home Economics of the National Education Association. This was well attended, and the program was, on the whole, well planned and stimulating. Of particular interest was the session dealing with Nutrition in the Public Schools which gave us such speakers as Dr. Ray Lyman Wilbur, Secretary of the United States Department of the Interior, Dr. Henry C. Sherman of Columbia, and Dr. Lydia J. Roberts of the University of Chicago. Dr. Mary Schwartz Rose, Teachers College, Columbia University, presented the subject and led the discussion that completed a very full and meaty program. A clear and definite challenge was thrown to home economics teachers by Dr. Roberts, who urged them to take advantage of the opportunity offered them for leading in the work of nutrition education, especially now when the need has been shown to be so great. Teach simplicity in food for children was the plea of Dr. Wilbur, who pointed out that if ignorance of good nutrition is the main cause for the six million undernourished school children in this country, then home economics teachers and nutrition experts have an enormous opportunity for service . Within the next few months we will have a lot more to tell you about this meeting—in the meanwhile, think over these "highlights," or perhaps we should call them "headlights," since they shine up so clearly as a pressing need in this time of economic stress. Are you meeting your responsibilities as a Home Economics teacher? Are you fitting yourself to join the groups who are going to lead in the march for better nourished children, and for the establishment of good health and food habits in school children?

Synthetic Textiles

Interest in the various types of chemical yarns, or of so called synthetic textiles, and the rather amazing growth and development of the industry, led us to ask Pauline Beery Mack, well known in the home economics world, to write the article published here, giving a brief history of the synthetic fiber industry in America. Teachers of clothing and textiles will, we feel sure, find here much useful and valuable information, simply written to suit the needs of high school and junior college students. Mrs. Mack traces the early discoveries and experiments which were made in Europe during the 19th century, up through the various methods and processes that led to the making, in 1910, of the first really successful yarn. In 1931 over one hundred twenty-five million pounds of chemical yarns were produced, and rayon had become a household word.

Emergency Lunches

The problem of feeding hungry children, of seeing that they get at least one meal a day made up of the right kinds of food, and enough of it, is one that is facing hundreds of communities all over the country. The schools, in many places, have undertaken the job, and home economics departments are, in many instances, doing the work of planning, preparing and serving the food. In New York city the problem is particularly acute, and in this number, Miss Martha Westfall and Miss Josephine Adams tell what is being done, how the situation has been met, how new developments are taken care of, and how they manage, at this writing, over three hundred lunchrooms and also serve meals in a large number of schools where there are no regular lunchroom facilities. They are doing a splendid piece of work, and while New York City has many problems peculiar to itself, it also has many that are common to almost any community, so that the methods used may be applied to your own group.

Good Food Habits

The White House Conference on Child Care and Protection brought out very clearly the need that exists for education in the establishment of good food habits in schooi children. In Canton, Ohio, an experiment has been in progress that shows how health lessons, including the important lesson of good daily food habits, can be adapted to a junior high school program. This month Miss Stolzenbach tells of the plan for establishing good daily food habits, and gives as well a bibliography for pupils and for teachers and a suggested list of good teaching material.

Also of Interest

Are the stories by Dorothy Gladys Spicer, describing bread customs among the Slavs; by Doris Sutcliff on One Hour Periods for Foods Classes; a fine story written as a food project by an eighth grade student, and called "Alice in Foodland," which seventh and eighth graders will be sure to like; Ruth Beddle's account of some interesting projects in foods and clothing carried on in Urbana, Illinois, last year.

To Contributors

Please be sure your name and address are written legibly on all contributions sent in, especially those short items sent in for Home Economics Exchange. We have had several checks returned because our guess as to your post office address was wrong and we can only judge by your writing. If possible have all contributions typed.

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Flemish Girl Spinning

By

S. Leon (1860 —)

PRACTICAL HOME ECONOMICS

VOL. X MARCH, 1932 NUMBER 3

Chemical Yarns

A Brief History of the Synthetic Textile Fiber Industry in America

By
Pauline Beery Mack
Pennsylvania State College

THE first pound of synthetic textile fibers produced on a commercial scale in the United States made its appearance in 1910. During 1931, the year of its twenty-first birthday, the American chemical yarn industry had an output in excess of 125,000,000 pounds.[1] Practically every country of Europe and many Asiatic countries can show a record equally striking.

What were the beginnings of this chemical yarn industry, which has shown such a phenomenal development that it has revolutionized the textile industry in general?

The First Inspiration for Making Artificial Textile Fibers.

Réaumur, a French physicist living from 1653 until 1757, was the first person who dreamed of the possibility of making silk artificially. He published "A History of Insects" in 1754 in which he states that silk is merely a gum which has been dried. He then discusses the possibilities of producing filaments similar to silk in appearance by drawing out viscous liquids, such as varnishes, into fibers.

The First Successful Artificial Textile Fibers.

Although numbers of people tried to act upon Réaumur's suggestion, none of the varnishes known at that time were found to be adaptable for making textile fibers. In 1875, the German chemist, Schönbein, discovered a method of making nitrocellulose which is now described in all of our elementary textbooks—the treatment of cellulose with a mixture of concentrated nitric and sulfuric acids. Shortly after this discovery, a French chemist—Audemars of Lausanne—actually took out patents for the production of "artificial silk" from a solution of nitrocellulose in various solvents. The fiber which this scientist made, however, was not practicable from a textile point of view.

It was not until 1884 that a successful artificial textile fiber was produced. The inventor was Count Hilaire de Chardonnet (1840-1924), a French scientist who had studied under Pasteur at the École Polytechnique in Paris. Chardonnet became interested in silk while he was a student. His interest resulted from the fact that Pasteur was, at that time, engaged in a study of the diseases of the silkworm.

When Chardonnet first became interested in making artificial fibers similar to those produced by the silkworm, he first tried to digest the leaves of the mulberry tree—the food on which the cultivated silkworm feeds—by some chemical means, and then force the liquid through some small opening, such as a capillary tube. Reasoning from this point, he came to the belief that the leaf of this tree consisted to a considerable extent of cellulose, and that it did not differ materially from cellulose from other sources. But it required many years to arrive at this conclusion.

Chardonnet's preliminary work dated from 1878. It included a study of the life and habits of the silkworm, and a study of the chemical nature of the mulberry leaf and body of the tree. It took him some time to free himself from the belief that there was some peculiar characteristic of the food of the worm which made it possible for silk to be produced. In fact, the first successful fibers made by this great research worker were produced by a series of chemical treatments from the cellulose of mulberry trunks and limbs. Later he tried wood from other trees, and finally, found that he could use fine white tissue paper or cotton. In fact, the last-named product served much better for his process than wood pulp, because it contained more cellulose.

The first fibers which Chardonnet produced were highly inflammable, because they were of the same chemical composition as guncotton. It required another series of researches to find out a means of eliminating this difficulty. The inventor finally worked out a chemical process for removing the nitro groups from the fibers, these chemical groups being responsible for their explosibility. The final substance of which fibers produced by this method are composed is cellulose, or hydrated cellulose, the same compound which constituted the original raw material but in a regenerated form. The steps in the process are necessary in order to change the physical form of the raw material, rather than its chemical composition.

The Second Type of Artificial Fibers

The second type of synthetic textile fibers to be invented was the cuprammonium filament presented for patents in 1890 by a French scientist named L. Despaisses. Because the inventor died before the final acceptance of the patent, however, it was not published according to the French law of that date. In 1897, H. Pauly patented practically the same thing, with but a few modifications, in England. The process consists of digesting cellulose (usually cotton linters) in an ammoniacal solution of copper sulfate, and then forcing this liquid through the tiny orifices of a spinneret into a hardening bath of dilute acid.

In 1899, Fremery and Urban took out patents for improvements on Pauly's process, which led to the establishment of the Vereinigte Glanzstoff-Fabriken at Elberfeld, Germany.

In 1901, Dr. Edmund Thiele, of Bar-

[1] See "Rayon Comes of Age," by Francis A. Adams, in *Rayon and Synthetic Yarn Journal*, July, 1931.

men, Germany, took out patents for an improved process for drawing filaments into finer fibers by a method of "stretch spinning." His invention consisted in drawing the filaments out to the desired size before final coagulation, and keeping them under tension for the short time necessary for them to harden. The firm of J. P. Bemberg A. G., of Barmen, Germany (established in 1792, and operating as a dye works and mercerizing establishment from that time on), began making synthetic fibers on an experimental scale, using the process owned by the Vereinigte Glanzstoff-Fabriken for producing the fibers, and that of Thiele for drawing them into extremely fine filaments during spinning by the "stretch" method. When these combined processes were fully worked out and placed on a paying basis, the J. P. Bemberg Company of Germany began to devote itself exclusively to the manufacture of synthetic textile fibers.

The Viscose Process

Only two years after Despaisses' first announcement of cuprammonium filaments, two English inventors—Cross and Bevan—discovered an entirely new method of digesting cellulose. The product developed by these men was produced in two stages: (1) the digestion of the cellulose by sodium hydroxide, and (2) the conversion of the alkali-cellulose thus formed into a soluble xanthate by treatment with carbon disulfide. A brown, viscous liquid is produced as a result of this treatment, which the inventors named *viscose*. Hence the name of the process.

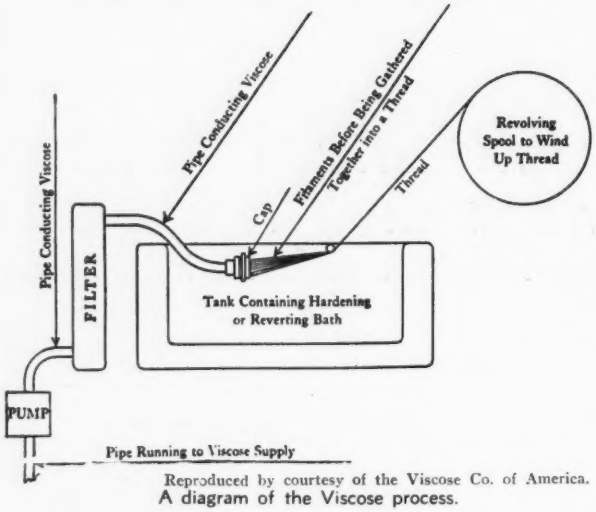
It was three years after Cross and Bevan had worked out the "viscose" method of dissolving cellulose before a serious study of the spinning capabilities of the liquid was undertaken. This research was done at the Incandescent Lamp Works at Zürich, Switzerland, with the idea of applying viscose filaments to the manufacture of incandescent gas mantles. A measure of success attended this first venture, but it was found impossible to produce continuous threads of the quality and quantity necessary to market the product as a yarn.

It was not until 1910 that the major technical difficulties of spinning viscose filaments were overcome. These were solved by an English inventor named Topham, who devised a centrifugal box for drawing the fibers forward out of the coagulating bath, twisting them into a thread, and winding the threads into a veritable cocoon of mammoth proportions.

When the fibers harden in this tightly wound condition, they form what is called "cake." The yarn can be unwound from this with little difficulty.

Cellulose Acetate Fibers

The fourth type of cellulose textile fibers to be produced artificially is made by the cellulose acetate process. In this process, a compound of cellulose—cellulose acetate—is produced, and this is not regenerated again into cellulose, as in the other processes. Instead, the final filaments consist chemically of the acetate of cellulose.



Reproduced by courtesy of the Viscose Co. of America.
A diagram of the Viscose process.

Prior to the war Camille and Henri Dreyfus of Switzerland had already invented a method of turning cellulose acetate from a fibrous substance into gossamer filaments. But the drawbacks of handling these filaments in early days were legion. At the opening of the war these men were called to England to operate a plant for making cellulose acetate for dope for aeroplane wings. At the conclusion of the war they perfected their earlier processes on a commercial basis which enabled them to use this same plant, owned by the British Cellulose and Chemical Manufacturing Company, for the production of acetone soluble cellulose acetate, to which was given the trade name *celanese*.

Raw Materials Used in Making Chemical Yarns

Cellulose is the raw material universally used in making artificial textile fibers. This chemical compound, to which the chemist assigns the formula $(C_6H_{10}O_5)_x$, has a wide distribution in the plant world. The two chief sources now used are cotton linters and wood pulp, although other raw materials are receiving the attention of the research chemist at the present time.

Cotton linters are obtained from the linter-gin, a machine which shaves off the fibers which cling to the cotton seeds after the regular ginning process. To these fibers, other waste cotton combings are added, the whole being then given a purification treatment with caustic soda, followed by a bleach.

The wood pulp used in the chemical yarn industry is restricted almost entirely to spruce pulp. The only process adapted for the successful employment of this cellulose raw material is the viscose process. In this, either wood pulp, cotton linters, or a blend of the two is successfully used.

A great amount of research work is now in progress for the purpose of trying to find ways of utilizing other cellulose-containing raw materials. Cellulose from peanut hulls, corn stalks, cane, and other cheap raw materials are bidding fair to serve as suitable raw materials in the synthetic textile industry, as soon as satisfactory means of purifying them and converting them into a good grade of cellulose have been worked out.

Main Steps in the Manufacture of Chemical Yarns

The main steps followed in the manufacture of synthetic textile fibers by each of the four methods in common use are outlined below.

The Nitrocellulose Process

COTTON LINTERS
treated with | nitric and sulfuric
↓ acids
NITROCELLULOSE
dissolved in | ether-alcohol
↓
SOLUTION RESEMBLING COLLODION AND CONTAINING ABOUT 20% NITROCELLULOSE
spin | ning
↓
NITROCELLULOSE FILAMENTS
denitration | with sodium or
ammonium ↓ hydrosulfide
CELLULOSE FIBER
Bleaching, usu | ally with chlorine
↓
CHARDONNET OR REGENERATED CELLULOSE FIBERS

The Cuprammonium Process

CELLULOSE
(Usually in the form of cotton linters)
Dissolve in ammo | niacal copper oxide
↓
CUPRAMMONIUM SOLUTION OF CELLULOSE
Spin | ning
↓
CELLULOSE FILAMENT (containing impurities)
Bleaching | and washing
↓
CUPRAMMONIUM FIBERS
(REGENERATED CELLULOSE)

The Viscose Process

WOODPULP (usually spruce) OR COTTON
Digested wi | th NaOH
↓
ALKALI CELLULOSE "CRUMBS"
Treated with | carbon disulfide
↓
CELLULOSE XANTHATE
Dissolve in an | alkaline solution
↓
VISCOSE
Spinning into | acid bath
↓
FIBERS OF IMPURE CELLULOSE
Washing | Bleaching
↓
VISCOSE FIBERS
(REGENERATED CELLULOSE)

The Cellulose Acetate Process

CELLULOSE (cotton linters, usually)
Treated with | acetic anhydride
↓
CELLULOSE ACETATE
Dissolved | in acetone or similar reagent
↓
CELLULOSE ACETATE SOLUTION
Spin | ning
↓
CELLULOSE ACETATE FIBERS

Distribution of American Chemical Yarns By Processes

The following table, compiled by Francis A. Adams, gives the approximate amounts of synthetic textile yarns produced in the United States by each of the major processes during the ten-year period from 1921 until 1930, inclusive:

	Pounds	*Percentage of Total*
Viscose Process	562,000,000	89.0
Nitrocellulose Process	40,000,000	6.0
Acetate Process	23,000,000	4.0
Cuprammonium Process	6,000,000	1.0
Total	631,000,000	100.0

Some of the American Companies Producing Chemical Yarns

It is not possible to discuss all of the companies which produce synthetic textile fibers in this country. We will therefore confine ourselves merely to a brief mention of those which produce the greatest volumes of this commodity.

Pioneer American Company—The Viscose Company of America

The Viscose Company established the first synthetic yarn plant in this country at Marcus Hook, Pennsylvania, in 1909. The plant manufactured only a small amount of yarn in 1910, but had an output of 362,544 pounds in 1911. This amount has been increased steadily up to the present time, the company producing more than 70,000,000 pounds of yarn last year.

The second plant of the Viscose Company of America was started in Roanoke, Virginia, in 1916, and the third in Lewistown, Pennsylvania, in 1920. A fourth plant was built by this company in Parkersburg, West Virginia, in 1929, and a fifth in Meadville, Pennsylvania, in 1930.

Whereas the Viscose Company has manufactured viscose yarns exclusively until very recently, they have announced the introduction of a cellulose acetate yarn in a recent issue of *Rayon*. This announcement states that the new yarn—*Seraceta*—has a background of twenty years of laboratory research.

American Manufacturer of Yarns by the Nitrocellulose Process

One of the early plants to manufacture fibers by the nitrocellulose process as worked out by Chardonnet was established at a place in Belgium which came to be called Tubize, because of the fact that the fiber was extruded through fine capillary tubes at that time, instead of the orifices in a non-corrodible metal disc, or spinneret, used at present. The Tubize Artificial Silk Company of America, an outgrowth of this European concern, took over the war plant at Hopewell, Virginia, at the close of the world war. They converted this into a chemical textile yarn plant, where they manufactured yarns by the nitrocellulose process.

From the year of its founding, 1921, until the present, the Tubize company has been the chief producer of nitrocellulose yarns in this country. In 1929, the American Chatillon Company built a plant at Rome, Georgia. In 1930, the Tubize and Chatillon companies combined as the Tubize Chatillon Corporation. This combined company now produces yarns by the nitrocellulose, the viscose, and the cellulose acetate processes. The yarns which they make by the last of these processes are sold under the trade name *Chacelon*.

The Du Pont Rayon Company

The Du Pont Rayon Company established its first plant in Buffalo, New York, in 1921. A second plant was built at Old Hickory, Tennessee, in 1925, and a third and fourth in Ampthill, Virginia, and in Waynesboro, Virginia, during 1929. This company has been particularly interested in developing rayon yarns of high filament counts, and their laboratory researches in this field have benefitted the entire rayon industry. They make yarns by the viscose and the acetate processes, the latter being called by the trade name *Acele*.

Pioneer Manufacturers of Cellulose Acetate in this Country

The Celanese Corporation of America, with a plant at Amcelle, Cumberland, Maryland, was the first manufacturer of cellulose acetate yarns in the United States, its work having started in 1925. This company not only maintains a highly trained research staff in its plant laboratories, but it has also established a research associateship at the laboratories of the National Association of Dyers and Cleaners at Washington, D. C. Through the work of this associateship, drycleaners the country over have been assisted in adapting their processes so that they could handle in an expert manner not only fabrics made of Celanese brand yarns, but the other chemical fibers as well.

American Manufacturer of Yarns by the Cuprammonium Process

The American Bemberg Corporation built a plant near Elizabethton, Tennessee, in 1926. In this plant, yarns are manufactured by the cuprammonium process, with the additional "stretch spinning" process previously mentioned also included. By this latter process, filaments of remarkable fineness are produced. The fineness of the Bemberg filaments makes it possible to use these yarns in making distinctive fabrics.

Other American Manufacturers of Chemical Yarns

Other important manufacturers of synthetic textile yarns in the United States may be briefly mentioned as follows:

The Belamose Corporation, with a plant in Rocky Hill, Connecticut, built in 1925.

Industrial Rayon Corporation, incorporated in 1925, with plants in Cleveland, Ohio, and Covington, Virginia.

Acme Rayon Corporation, with a plant in Cleveland, Ohio, established in 1926.

The Delaware Rayon Co., Wilmington, Delaware.

The New Bedford Rayon Company, New Bedford, Massachusetts.

American Glanzstoff Corporation, with a plant near Elizabethton, Tennessee, established in 1928.

American Enka Corporation, with a plant built on a large tract of land in North Carolina, now called Enka, North Carolina.

Woonsocket Rayon Company, with a plant at Woonsocket, Rhode Island, built in 1929.

The Name Rayon

In 1925, representatives of the synthetic yarn industries and of government bureaus in this country discussed the adoption of a distinctive name for chemical textile yarns. This seemed particularly desirable because of the widespread use of the term "artificial silk." This term was particularly distasteful to the manufacturer of the chemical yarns because these yarns had distinctive characteristics, and had come to occupy their own field of application in the textile world, and hence were not an imitation of silk.

In order to do away with the misnomer "artificial silk," the word ***rayon*** was therefore coined as the generic term for yarns produced chemically. This term has had very widespread acceptance by the producers and users of certain chemical yarns, and by governmental agencies in reports. The present tariff refers, how-

(*Continued on page 103*)

Foods Classes For One Hour Periods

By
Doris K. Sutcliffe
Fanwood, New Jersey

THOSE of us who recall foods class as the major portion of an afternoon (when we, as students, spent three hours in the laboratory) are facing a decided change of program in our own teaching today. Fundamentals remain, of course. We use the same measurement tables and we do not discard old recipes when we add new ones; but we see a wider application of theory.

It has been proved advisable for schools, both public and private, to include some foods work in their courses. This pioneering has been accomplished. The follow-up work remains for us to establish.

Now, when the average up-to-date school places a foods course in its curriculum, that subject must occupy a period conforming in length with other class periods of the well balanced educational program. Pupils who are preparing for college-study in lines other than home economics, and those girls who are preparing for office positions, have only a limited time available for foods work. —Yet they feel a desire for the course. So we have come to the one hour cookery period in many preparatory schools.

The home economics teacher is confronted with the question whether to devote this one hour of class-time to lecture or to laboratory work. A lecture would be more simple to arrange and more adaptable to sixty-minute bounds than most cookery procedure. The thought of foods class encroaching on a succeeding period of English or mathematics is not pleasant to imagine. But, on the other hand, a lecture would allow no opportunity for pupils to learn by actually *doing*.

I realized this when I sought to adapt my lesson plans to the one hour laboratory period and to eliminate material which would not fit the time allotment.

Experience in 4-H Clubwork had convinced me of the desirability of setting goals before starting a project. I decided to arrange my foods lessons with a set of goals before me—a guard against the haphazard elimination of subject matter, and an aim above such a short, theoretical demonstration as "iodine test for starch in potatoes."

The result was the following:

GOALS

1. To create interest in food selection and preparation.
2. To teach deft motions; correct handling of kitchen equipment.
3. To overcome existing food prejudices.
4. To develop group leadership and confidence.
5. To stimulate ideas for every-day application of the food principles learned.

I worked out my own text in the form of mimeographed sheets and saw classes follow out these laboratory assignments for three years.

Parents are always the best judges as to whether the fifth goal has been reached. A letter from one mother stated that her daughter had recently prepared two simple noonday meals and cleaned up the kitchen afterwards. This indicated to me that goal number two had been attained; and there could be no doubt about the achievement of goal number one, in this instance. One young enthusiast confided to me that she was allowed to help mother plan and prepare dinner on the afternoons when Hilda was away. Another note later in the year came from an appreciative mother who said that Mary prepared many of the simple desserts for the entire family.

With the achievement of one worthy goal, a teacher's effort to make the one-hour period worthwhile, is amply repaid.

It is evident that experiments of the type that show the preserving qualities of certain spices or the starch content of potatoes, have no place in the one-hour period. To incorporate these numerous, well-known experiments within the period would be the same as to clutter a show window with knick-knacks and thereby detract from the model. An idea worthy of delivering is worthy of featuring. It deserves a prominent place and must be the center of interest, else a large percentage of the class will overlook the very principle you aim to stress. Keep the unit idea in mind.

Of necessity review is cut to the minimum. One lesson, however, bears upon the other to such an extent that the teacher soon discovers whether her pupils are grasping fundamentals, whether they are nearing the fourth goal.

Building a food lesson around the preparation of an entire meal is excellent for longer laboratory sessions; but it is not at all practical for the short period schedule. The only time I should advise preparation and serving of a meal during these classes would be at the end of the course, when additional time might be arranged to allow for clean-up work.

Since these lessons do not permit the cooking of entire meals, it is wise for the teacher to suggest other foods which would combine to make up a menu. I usually write this menu on the blackboard. Nearly every class will offer suggestions, too.

Group assignments are advisable, with two or three girls working together. Appoint group leaders. They will apportion the various tasks. The helpers will cooperate with their leaders, realizing that their turns for managing the group activity will come at other class periods.

Printed lesson sheets are essential. Punched for loose-leaf filing, and placed immediately in the students' notebooks, they constitute neat laboratory manuals and condensed texts. There should be no copying of recipes in class. Notebook work in the form of individual remarks is highly desirable: anything regarding the measuring, mixing, or cooking which impresses the pupil; or, a description of the results and how the product might have been improved. This check-up teaches careful attention to details. It is permissible and even advisable for these notes to be written during classtime. Extra sheets for notebooks should always be on hand, and pencils, too, so that no outstanding impression be forgotten. Notes of this type are valuable. They add a great deal to each student's learning. And they indicate to the instructor just how receptive her class is:

A satisfactory division of the one-hour period is as follows:

A. Explanation by the teacher
   1. description of work
   2. naming of groups
   3. appointment of leaders
B. Actual work by the class
   1. supervision by the teacher
C. Check-up of results
   1. tasting
   2. discussing finished products
   3. making notes
D. Clean up

As in all laboratory groups, the first meeting of the class is given over to a description of laboratory methods: lighting gas burners, explaining equipment, and stressing neatness. Spic-and-span cleanliness should be the pride of every class. Along this line, it is well to dem-

(Continued on page 105)

The Gift of God

The Story of Bread Among the Slavs

By
Dorothy Gladys Spicer

Photo by Ewing Galloway

A Czecho-Slovakian girl with her bread basket.

"AFIELD, afield, out in the open field!
There a golden plough goes ploughing,
And behind the plough is the Lord Himself.
The holy Peter helps him to drive,
And the Mother of God carries the seed corn,
Carries the seed corn, prays to the Lord God,
'Make, O Lord, the strong wheat to grow,
The strong wheat and the vigorous corn!
The stalks there shall be like reeds!
The ears shall be blades of grass!
The sheaves shall be like the stars!
The stacks shall be like hills,
The loads shall be gathered together like black clouds,"

chant Carpatho-Russian lads as they make their rounds of village homes, honoring the corn with the first *Kolyada* song of Christmas Eve. For to Slavic folk, grain is holy. It is guarded by the saints, brooded over by the Mother of God, and blessed by Christ Himself. It is the sacred substance from which bread is made. "Bread is the gift of God," says the peasant, adding quaintly that "without a bit of bread even a palace is sad, but with it a pine tree is Paradise!"

"God bless the dough," says the Bohemian peasant, whenever visiting a home where bread sponge is rising. The good housewife reverently measures her flour and blesses with mixing stick the trough where the dough is kneaded. And every time she touches the substance, she says a "God bless," so the bread will be light and the loaves crisp and sweet.

To waste bread is a sin which God punishes with his wrath. Demons, it is said, pick up the fragments of bread wantonly cast to the ground while a person eats. On the Day of Judgment, the pieces are weighed, and should they prove heavier than the wretched feeder himself, his soul is Satan's to the end of time.

Bread crumbs belong to the fire. To tread on them is to make the left ear deaf, or to cause weeping to souls in Purgatory. Bread must not be thrown away vainly. It may be fed to birds, fishes, or ants, but it must never be treated with scorn. When dropped by mistake, one kisses the bread and asks its pardon, for the gift of God is a holy thing.

Though punishment is severe to wasters of bread, God shows special favor to those treating it with reverence. Such persons are granted long life and prosperity, assurance against injury by thunder or death by drowning.

"The lips that curse shall want for bread," says the Pole, reflecting the attitude of all Slavic folk. Indeed, respect for bread involves a long list of taboos, illustrating the innate piety of the simple peasant soul. A surprising number of these taboos relate to the etiquette of cutting the loaf.

When bread is sliced, say the Bohemians, it must be cut evenly and well, for whoever is crooked in his cutting of bread, is unfair in his dealings with men. To hack the crust from a loaf is to slice off the heel of God, while to stick a knife into it, is like piercing the body of Christ Himself. Some say, to leave either a knife or a fork in the bread, will cause toothache to the offender, as well as unrest to his great-grandfather's soul.

When a person sits down to bread and milk, he is forbidden to cut the bread. It must be broken carefully into the bowl, as otherwise the cows will cease giving milk. The popular dread of using a knife on bread even goes so far as to cause Bohemians to declare that as long as a man keeps from cutting a loaf of bread, so long will he be enabled to withstand death.

There is a strong feeling against staying overnight in a breadless house. For

bread, being God's gift, is good to think upon, and anyone forgetful of it, is likely to forego divine protection. It is also unlucky, even sinful, to leave bread uncovered at night, because bread, like human beings, is entitled to sleep and repose.

Bohemian maidens use bread to foretell future events. Shortly before St. Andrew's Eve, two girls put bits of bread on a long shovel, which they hold under the nose of a hungry dog. The owner of the fragment first to be snatched by the animal, will be married first during the year. Once the wedding occurs, the young couple never neglects taking loaves of bread to the new home, so God will bless it with wealth and long days of prosperity.

"Sift, sift with sieves,
With sieves as fine as silk.
Let us sift our flour
And knead two loaves,
One for Pitkana,
And another for Stoyan,"

sing Bulgarian maidens, as they prepare the loaves of bread which hold an important place in the marriage rites.

On the Thursday before the wedding ceremony, (Bulgarian weddings always occur on a Sunday), young girls carry three wooden troughs and three sieves, first to the home of the bride and then to the home of the bridegroom. At both houses they sift the flour and prepare the dough, taking care to hide in it the good luck symbols of ring and bracelets. While some of the girls knead, others sing and dance about the troughs containing the precious sponge. Two loaves—those for Pitkana, the girl, and Stoyan, the lad—being more ceremonial in character than the rest, are made without leaven. These are the loaves carried to church before the wedding procession and later taken to the lad's home, where they are placed on a table in front of the *Kum*, or chosen friend of the bridegroom.

In the presence of the *Kum*, the young man drinks some wine and then divides one of the loaves between the girl and himself. "All luck be mine!" he breathes fervently as he does so, for, according to ancient superstition, the bridegroom's future happiness depends upon the manner in which the loaf breaks. If the larger piece is toward the boy he will be head of the household, but if it chances to fall toward the girl, he must be resigned to the lot of the henpecked husband.

With the birth of a child, bread again plays an important part. The Bulgarians believe that the Virgin assists women in labor. She is weary, they reason, and hungry, too, for the whole night through she has to hurry from the bedside of one suffering woman to another. Loaves of bread are therefore laid on a table for the refreshment of the holy guest. These loaves are always made by a young matron whose parents are living and who has a child of her own. The bread which is round, and is marked by a cross through the center, is blessed by the priest before being offered to the Virgin.

The Croats believe that at midnight, after a child is born, *Sudjenice,* or the Three Fates, appear at the baby's cradle. Like the fairies of old, who came to the christening of the Sleeping Beauty, *Sudjenice* have gifts to bestow. In their hands lies power to grant, on the one hand, long life and happiness, on the other, poverty and tribulation. If gifts are prepared for the Sisters, they, in turn, will give good gifts to the babe. So every Croatian mother sets out on a table bread and salt and a long wax taper, with the fervent prayer that *Subjenice* will prosper the child, rewarding it with blessings and health.

Nor must the loaf of bread be forgotten when a person is laid to rest in the tomb. "We must give for our dead in this world, so he may not lack in the next," say the Bulgarians piously, as they bake bread and distribute it to the poor, after the burial of a relative.

In some Slavic countries, as in Serbia, bread is placed in the coffin. In others, it forms a part of the funeral feast or is put on the grave of the departed. In some sections of Russia, bread is set on the bench the corpse occupied before being placed in the box. Since the soul of the dead man hovers in the form of a hungry bird, over the home of the living, the peasants scatter bread crumbs for it on window sills and ledges. The bird eats and is satisfied, and after a space of forty days starts forth, refreshed, on its flight to the world of spirits.

The Slavic housewife is alert to all kinds of omens when baking day comes around and she is ready to make bread, not for ceremonial purposes, but for every day, family use. She rises early, with a clean birchen twig broom sweeps the ashes out of the big earthen oven, and builds a hot fire of crackling wood. When all is ready, she kneads the dough into thick, round loaves, makes the sign of the cross over each, and brushes them over with water. Then the woman sprinkles her long-handled wooden shovel with flour, loads it with some ten or sixteen loaves, and shoves it into the heated oven. Just as she gives the final push to the shovel, the Russian woman tosses up her broad skirt, so the bread may rise like the lifted garment.

The actual baking is regarded with breathless suspense, for if the loaves crack, someone in the family will go away; if the dough bulges out in a "head" at the side of the loaf, the housewife will "lose her own head," or become forgetful before the setting of the sun. Unless old people and children are driven away from their accustomed seats on top of the oven, the bread will all be spoiled. The loaves are baked for a good two hours and then all must be taken from the oven at once, as otherwise the entire batch would fall.

On certain days bread making is forbidden. Mondays, Wednesdays, and Fridays are unlucky baking days, declare Bohemian peasants, while most Slavs agree one never should bake on Good Friday.

Perhaps one reason for the Russian peasant's horror of bread making on Good Friday is because the day before, known as Lady Day, is the occasion of a special religious ceremony to insure to each household the growth of grain and therefore the abundance of bread.

On Lady Day, small round loaves of bread are carried to church to receive the blessing of the parish priest. Later they are taken home and placed near the seed corn, or else broken into fragments and mixed with the grain. Indeed, this consecration of the corn is so important to the peasant that he will not begin sowing until it is done.

On the day for planting the fields, the sowers bend low to the east, to the west, to the north and the south, throwing handsful of the hallowed grain in each direction and breathing a prayer to God that the home may be blessed with bountiful crops and a goodly supply of bread.

Throughout the year the peasant watches over his corn, continually praying for its welfare, and honoring it with special rites on feast days and holy days. In Russia, as elsewhere, it is customary to visit the grain fields on Trinity Sunday, when the rye is beginning to ear. Village lads and maidens stand in lines on the way to the fields, making with their linked arms a sort of living bridge, along which trips a tiny girl, attired in festive frock and many-hued ribbon streamers. The bridge of arms is formed and reformed, until at last the fields are reached.

"The ear is going to the young corn," sing boys and girls during their progress toward the grain.

"To the white wheat,
Where the Queen has gone,
There the rye is thick.
Out of the ear a measure,
Out of the grain a great loaf,
And out of the half-grain a pie.
Grow, grow,
Rye and oats.
Flourish richly,
Father and Son."

Once the party arrives at the fields, the little girl jumps down from the bridge to pluck an armful of grain, which she speedily carries back to the village and carefully lays down in the shadow of the church.

(Continued on page 104)

Health Education Program

Daily Food Habits
With Special Reference to Breakfast

Note: This article is the third of a series describing the adaptation of health lessons to junior high school classes. The lesson outlines were prepared originally by the National Dairy Council under the direction of Lydia J. Roberts, Professor and Chairman, Department of Home Economics, University of Chicago.

By
Margaret Stolzenbach

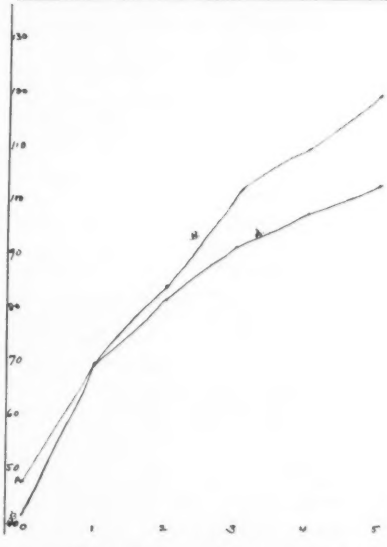
THE first two articles in this series described a cooperative Junior High School health program and covered the material necessary in teaching general health and growth, and rest relaxation and sleep. In teaching these units, all the departments of the school correlate their own work to fit into the general health program; weighing and measuring is done monthly by the physical education instructors; special cases are referred to the doctor and nurse; classroom teaching is done by the home room teachers in the seventh and eighth grades, where weight graphs and 24-hour schedules are kept. I teach the Foods Laboratory work which fits into the general program, and supervise the distribution of outlines and materials.

By the time we began our foods work the machinery of the whole plan was in good working order. We realize that the Junior High School has no more important problem than that of directing and guiding correct attitudes toward healthful and nutritious foods. Since the American public is becoming more food conscious every year, the generation now developing must be equipped to judge new fads as they appear and to distinguish the good from the bad. For instance, the fad of drinking tomato juice, which started a couple of years ago, is a healthful one, and will probably become a permanent style in our food pattern; the fad of omitting breakfast, so prevalent in Junior and Senior High Schools, is harmful and destructive.

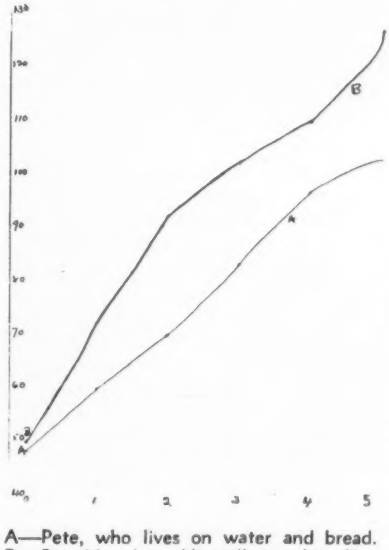
Before we attempted any connected teaching concerning food, the general science classes conducted a rat-feeding demonstration. These classes are composed of ninth grade pupils, and since our present health program only affects these pupils in a general way, it was an excellent device for emphasizing vital food knowledge.

The demonstration continued for five weeks and the rats were kept in the general science laboratory. We used pure bred laboratory rats, which were weighed and fed daily by the same four boys. The cages were made in the school shop, and a long, narrow wooden tray, used in carrying the cages from room to room, was also made there. Thus the whole demonstration was accomplished as a cooperative project between the various departments.

During the first week the rats were exhibited in a general assembly. One ninth grade boy explained to the audience the purpose of the experiment and told them that Pete (No. 1) was to be fed on water and bread, and that Oswald (No. 2) was to have the same diet, with milk added. Another boy gave the details of the diet of Mickey (No. 3), who lived on meat, potato, bread and water, while Archie (No. 4) was fed the same diet, supplemented by one tablespoonful of fresh vegetables and one tablespoonful of milk daily. At the same meeting a film named "Victory," rented from the National Dairy Council, was shown. This film was very effective, for it shows the effect of food on the health and habits of rats, then the effect of correct food and exercise habits in the lives of boys and girls.



A—Micky, who eats bread, potatoes, and water.
B—Archie, who eats meat, bread, vegetables, fruits, milk, water.



A—Pete, who lives on water and bread.
B—Oswald, who adds milk to this diet.

The four ninth grade boys who cared for the feeding and weighing of the rats, also acted as instructors to the physiology and hygiene classes in the seventh and eighth grades. We arranged a satisfactory schedule, and the boys carried the wooden tray containing the rat cages to the assigned rooms at specified times. The interest in the seventh and eighth grades was very great, and the pupils could draw their own conclusions from the demonstration and the questions which followed. Also, the four ninth grade boys gathered an amazing fund of knowledge during the experiment and proved invaluable assistants. Next year we intend to run the demonstration for eight weeks.

Since nutrition and food chemistry are highly technical subjects, we found the program effective when we started from the pupil's own observations and knowledge during the feeding demonstration, then progressed to his own personal situation. In investigating the interesting facts connected with his own eating habits, he will gradually understand the physiological background as well.

The teaching outline following this article deals with general food habit, and logically emphasizes foods for breakfast first. In developing a standard breakfast, the minimum requirements for an adequate meal can be well introduced first. In this year of financial distress, the absolute necessity for a generous supply of milk and whole cereals cannot be over-

emphasized. Milk and whole cereals supplemented by fresh fruit form an excellent breakfast for a school child. Eggs and bacon added several times a week assist in fulfilling the child's body needs.

Unfortunately, only girls are permitted to take work in our foods laboratory, but the preparation of plain, wholesome foods arouses much interest in the resulting dishes. Fresh, canned, and dried fruits are prepared in a variety of ways. The taste, food value and cost of all of these are carefully compared. Whole cereals are cooked in a variety of ways, and breakfast breads with whole grain flours are prepared. Milk beverages of all descriptions are presented as a part of a desirable breakfast menu. I have had dozens of girls tell me that they disliked milk, but I have never seen one of them refuse cold milk, cocoa or other milk beverages. Eggs are prepared in a variety of ways and are used in an attractive form in the whole breakfasts, which are served later as a summary of previous work.

The information gathered from the two previous units will help in evaluating the need for emphasis on certain foods. For instance, when an underweight child watches his growth curve for three months, the increase in weight which usually follows a quantity or quality variation in his daily breakfast will prove an incentive for him to continue the habit. The rat weight graphs have proven effective in certain cases, and I show them to underweight children to emphasize the necessity for a generous supply of fresh fruits, vegetables, milk and whole cereals. The twenty-four hour schedules have helped me in understanding home conditions. Since our program is well launched now, I am interviewing the seriously under-weight children frequently, and the school is helping in every way it can to give assistance and encouragement where it is needed.

In the classroom teaching, we found the food models an excellent aid in establishing good breakfast standards. These may be purchased colored, or uncolored ones may be painted by the students. Next to the actual food, these models create an atmosphere of reality, and the added interest makes teaching more effective. The models may be put into small wooden blocks and set upon a tray to represent a meal. Another device for using the food models consists of a large poster on which are outlined the figures of a high school boy and girl, seated at a table. This device was developed originally by the Elizabeth McCormick Memorial Fund and lately has been adopted by the National Dairy Council. The table is fashioned of lengthwise folds of white paper, and the food models slipped into these crevices actually do resemble real food set upon a table. The poster may be purchased with the figures outlined, to be painted by the students, or the art department may make the whole device.

The most important thing for the pupils to grasp from the teaching is the actual formation of daily habits which include three wholesome meals. Each teacher must meet this problem in the way best suited to the needs of the pupils in her care and although the work is never ending, the results will be well worth the effort.

Daily Food Habits Unit
With Special Reference to Breakfast

I. Purpose

To inform pupils on the functions of food in meeting body needs.

To acquaint pupils with the methods by which foods are taken care of within the body.

To aid pupils in setting up standards for an adequate day's diet.

To create in pupils an interest in and a responsibility for establishing good daily meal habits. (Only good breakfast habit it considered in detail in this unit).

II. Subject Matter

A. The kind and amount of food is of first importance in maintaining health and supporting growth.

B. Good digestion, assimilation and elimination are necessary to proper nourishment of the body.

C. Scientists have indicated the quantities of certain foods needed every day to supply an adequate diet.

D. It is important for all, and especially for boys and girls, to form the habit of eating substantial meals at regular hours, every day. A good breakfast is important because it renews one's strength and prepares one for an active day.

III. Teaching Suggestions

A. The amount and kind of food important to health and growth. (It should be understood that functions of food overlap and that foods eaten chiefly to supply one body need may contribute much to the diet in other respects.

Class discussion may be developed as follows:

1. The body must have the right *amount* of food. Quantity of food is important for energy. Energy is needed by the body for work, play and growth. The richest energy foods are: fats, such as butter, cream and oils; starchy foods such as bread, breakfast foods and potatoes; sweets, such as sugar, syrup and desserts.

2. The body must have the right *kind* of food.

Special kinds of foods are needed for stimulating growth and protecting health and for actually building body parts.

Substances in foods which stimulate growth and protect health are called vitamins. Foods richest in vitamins—milk, fruits and vegetables—are known as "protective" foods.

Foods eaten chiefly for building muscle are called protein foods. Meat, fish, cheese, eggs and milk are the chief sources.

Substances in food which build bones, teeth and blood are called minerals. Calcium (lime), is the most important bone and tooth builder. Its most dependable source is milk. Iron is essential in the building of red blood. Meat, green vegetables, and eggs are important sources of iron.

B. Good digestion, assimilation and elimination are necessary to proper nourishment of the body.

1. The digestion of food in the body.
   (1) The parts of the digestive tract.
   (2) The digestive juices.
   (3) The process of digestion.
   (4) The absorption of food.
2. Aids to good digestion, such as:
   (1) Regular meals similar in bulk from day to day.
   (2) Foods containing enough roughage to clear the digestive tract.
   (3) Food thoroughly chewed to properly prepare it for digestion.
   (4) A daily bowel movement at a regular time. (Preferably immediately after breakfast).

C. Certain foods taken in sufficient quantity daily meet body needs:

Class may be given the following "formula" which scientists recommend as adequate for supplying daily needs of the growing boy or girl:

Food

Milk—as a beverage or in foods 1 qt
Vegetables (other than potato)
1 raw, at least, 2 servings
Fruits, one citrus or tomato (raw or canned)—at least 2 servings
Whole grain cereal (as breakfast food or bread) at least 1 serving
Protein food (as cheese, egg, fish, meat or more milk)
at least 1 serving
Additional foods (as more bread, butter, potatoes, desserts, etc.). (Enough to cause regular gain in weight and to keep well and strong. Each person's need differs with the amount of his activity).

D. Good daily meal habits, foundation of adequate diet.

1. Boys and girls should eat three substantial meals every day.
2. While all meals are important, breakfast is unusually urgent in that it comes at a time when the body has been without food for a long time.
3. A good breakfast every morning renews one's strength and prepares one for an active day.

(Continued on page 104)

House Furnishing Courses For Today

By

Blanche E. Hyde

Photograph courtesy W. and J. Sloane, N. Y.

This charming living-room of Early American inspiration has both distinction and simplicity.

ONE wonders now and then whether courses in house furnishing recommended for students majoring in home economics are keeping up with the changes in conditions of living which are influencing our lives and the general character of modern homes. Some of these changes are as follows: extreme fluctuations in business and economic conditions; lack of, or difficulty in obtaining household help; necessity of having some of the housework done outside the home; trials of transportation and time involved, making it necessary for people to congregate in large centers where land values and rents are high thus limiting the amount of spcae for which one can pay.

These and other conditions have brought about almost as much of a revolution in living arrangements as that which occurred in industry with the introduction of machinery. Houses now being built are smaller; the number of rooms per house is constantly diminishing; more often than not the size of the individual rooms is barely adequate; there is less storage space, for with easy and frequent laundering and rapidly changing styles the wise rule is to keep on hand only a small amount of household equipment, and comparatively few articles of clothing, but all suited to definite needs.

Where formerly rooms were single-purpose affairs we now have dual-purpose or sometimes many-purpose rooms. The parlor has vanished to parts unknown, and the living room has taken its place. In smaller homes the formal dining room has given way to the breakfast nook for hasty meals with a combination living-and-dining room for all other occasions. The bedroom must often serve as a sitting room, too, and one must even plan furnishings for the one-room apartment which in cities frequently fulfills within its four walls all the functions of a living, dining, and bedroom.

Photograph courtesy W. and J. Sloane, N. Y.

This amusing toile is a copy of one made in England between 1780 and 1790, to get back the trade with America lost during the Revolution.

Congested population, proximity of other homes, and the dust and noise of traffic have been partial causes for the disappearance of the front piazza or porch, but the desire for outdoor lift has brought into being the sun room or sun porch, a place where one may enjoy some of the outdoors and yet have a certain amount of privacy. This calls for a definite type of furnishings and one which always appeals to students. A further advantage of the sun room is that it is quickly convertible into a usable bedroom or study for an individual if necessity demands. This may bring up the question of dual-purpose furniture, a very pertinent topic in any house furnishing course. In homes where a sun room is not possible there is frequently planned instead a sort of recreation room, often located in the basement. This should receive a goodly share of attention in discussions of furnishings. Modern homes have many built-in features, and a study of possibilities in this line, including also ready-built units for fitting into convenient spaces, would make an excellent topic. We have been accustomed to think of these units more for kitchens and service rooms but some that are most attractive are now being featured for other parts of the

house. Designs for these are greatly improved and the best types fit in well with most any furniture style or room finish.

Business and social contacts are more frequent in these days but are apt to be shorter and more intensive. In many ways social contacts have become exceedingly simple and stripped of ceremony and formality. This simplicity of life has affected the general character of household furnishings and has perhaps helped to the development of the type now being referred to as "contemporary." This style, unfortunately criticised by some, contains much of beauty in the way of proportion, form, and line, and best of all, little useless decoration. There are many versions of this contemporary furniture, and teachers will need to study these well and help their students distinguish between designs that will prove to be novelties and those that will stand the test of time. The more conservative types that are coming into vogue are sure to last.

Each season new materials for use in house furnishings are being featured. Some that seem quite extraordinary frequently prove satisfactory in use and are later adopted as standard for different purposes. An outstanding feature of some of the contemporary furniture shown in the use of metal in construction. Unless it is possible to present good illustrative material in this line it is difficult to impress upon people the real attractiveness of metal used in this way. Unfortunately the best examples are still too expensive for general use. An interesting fact to remember in connection with metal furniture or metallic finishes used in other ways in furnishing is that the metal is not considered from a color standpoint in itself, but will greatly enhance color effects in a room.

Briefly, then, the changes of which the teacher of house furnishing should take cognizance are: a smaller amount of space; more rapid and strenuous living; new uses for old materials; experimentation in uses of materials hitherto unknown. Each of these bring its special problems in furnishing and as far as possible every step of advancement should be presented in the course. No doubt much time is still being spent in pleasant discussions of period styles and arrangements of furniture from a standpoint of appearance and artistic effect, rather than in its relation to family needs and habits. Just as clothing is being selected more and more for definite uses and occasions, so furniture is now being purchased for the use of individual members of the family or for some special purpose. It is being grouped or arranged according to work centers, individual preferences or interests, and family habits. Successful furniture arrangements are not made blindly nor by plotting to scale on a floor plan. They necessitate a knowledge of family habits, otherwise they are forced and refuse to function. These points should be incorporated in house-furnishing courses.

Photograph courtesy Congoleum-Nairn, Inc.

That the modern practise of utilizing every square inch of space can produce beauty as well as efficiency is shown in this kitchen, whose very walls are washable as well as attractive.

The problem confronting the teacher is really two-fold: that of setting up ideals from an artistic and livable viewpoint, and also that of improving the conditions in house furnishing as they exist in the homes of her students. Ideally and theoretically the two methods should be combined, but in the case of the first there is danger of setting the standard so high that it will be considered impossible of attainment. Students will become discouraged and dissatisfied and parents annoyed, feeling that the teacher is not practical. In the second method the greatest care must be exercised not to permit the slightest criticism of styles now out of date, or of local customs in furnishing. Badly furnished homes are not always due to lack of knowledge as to what is correct. Fully as often a limited selection and inadequate finances are the cause. The merchant in a small town invariably stocks his shop with articles recommended to him as best sellers in order that his turnover may be rapid. Best sellers however do not always reflect public taste.

In setting up ideals a study of period furniture provides an excellent background and background is surely needed —one packed to the brim with art principles.—But in this day and age might it not be well to approach the background from the immediate present, studying modern examples individually and also grouped for use in a home, analyzing each piece from the viewpoints of suitability, artistic merit, and cost? And after that, consider its relation to some previous style or period, comparing the virtues of each and thus bringing the periods into close relation with the present?

A common difficulty encountered by homemakers and often not considered in courses of this kind is the combination, or use in the same room, of furniture differing in period, wood or purpose. It is not so much the close adherence to similar styles that is important as a feeling as to the types which may be used successfully in the same room, taking into account design, wood, upholstery and general use. To understand all this thoroguhly the teacher herself needs a rich background of history and art as well as of the manners and customs of the times.

There is at present the greatest interest in American furniture the type in use in this country from the earliest times down. Colonial and Early American styles have been much stressed, and there is opportunity for the teacher to interpret these types in conection with the life of the times in which they were used as well as to consider their suitability to present conditions. Many of the reproductions of these pieces are true to the original form while others have been adapted to modern conditions. The term "tradition furniture" has been coined to cover some of the best reproductions and although at present a trademark it is a term which will more than likely come into general use. The Washington Bi-centennial is bringing into prominence a large number of accessories for the home, and is increasing interest in Early American furnishings. Some of the examples of contemporary furniture fit in well with Early American and Eighteenth Century pieces. Except as background it is rarely wise for the teacher to spend a great amount of time on elaborate period type.

In our consideration of color schemes let us emphasize the amount of light reflected by various colors themselves, and by colored materials; the size and location of the windows; and the general use of the room. These and other fac-

(Continued on page 106)

Projects in Foods and Clothing

By
Ruth Beedle
Urbana, Illinois

PROJECTS, as an integral part of the school work, were introduced into the Thornburn Junior High School in 1930-31. They were so arranged that a project in a different class was completed each month, thus covering the whole curriculum in the course of the year. The underlying motive in this plan was to establish closer relations between the textbook and the home laboratory by encouraging the pupils to make practical use of the facts learned in daily recitations, as well as to enable them to broaden their outlook in exercising their own originality and resourcefulness. Individual effort and initiative were recognized, perfect freedom in the choice of materials and methods of accomplishment was allowed, and the finished products were valued as much for the ingenuity displayed in their construction as for the suitability of the particular theme selected for illustration.

The early exhibits, especially the little models of theaters, with dolls dressed in costumes historically correct, and a refrigerator, cooled by evaporation, were so clever and interesting that it seemed as if there might be a dearth of ideas for the home economics projects, which were not due until April. Happily, however, such fears proved groundless, and from the splendid showing made by the seventh grade clothing classes, a few projects have been chosen to show the range of subjects presented. They fall easily into four groups:

I. Garments and household furnishings
- Underslip
- Napkins
- Apron
- Shorts
- Blouse
- Dustcap
- Laundry bag
- Smock
- Chair cushions
- Pillow tops
- Pillow bag for pajamas
- Linen sampler, with alphabet and stage coach in cross stitch. Dresses, for dolls and little sisters, itemized costs and time.

II. Posters
- Large sheet of cardboard, with colored figures of girls in costumes of all nations.
- National costumes showing types of embroidery.

III. Models
- Doll bedroom with furniture and furnishings, two braided rag rugs, mattress, bedspread, pillows, window draperies, etc.

IV. Textile Books
- 100 named samples, grouped according to fiber.
- One complete outfit for school girl, with pictures and samples.
- Named samples suitable for school and better dresses for two girls, blonde and brunette, with appropriate styles.
- Story of the sewing machine, with a small hand machine.
- Story of the loom with illustrations.
- Samples of different stitches and seams.
- Samples of the trimmings.

The eighth grade foods projects were, if possible, even more varied and fascinating, and may be considered in three groups:

I. Posters
- Cuts of various types of meat with methods of serving.
- Types of cooking with picture of of food cooked by that method, as roasting, baking, etc.
- "We are in the soup," with chart giving food values.
- "Which road will she take?" Good food—Poor food.
- Map of world showing ingredients for cup of cocoa and piece of cake. "If ingredients could run, where would they come from?"
- Alphabets with each letter illustrated by a picture of food beginning with that letter.
- Health is wealth, but you can't buy it.
- More of this (wholesome foods) and less of that (unwholesome foods.)

II. Models
1. Spring flower luncheon. Color scheme—lavender, purple, and white. Crepe paper tablecloth and napkins. Place cards, with daintily dressed fairies standing up. Water lily centerpiece with small water lilies decorating candles.
2. Sunny Jim goes to a picnic. Characters represented by foods, made of paper.
3. Kitchen. Paper furniture.
4. Dining Room. Table, chairs, tablecloth, wallpaper, pictures, curtains. Dishes, made doll size, from salt-flour-water mixture, with gold edge. Silver—made of pasteboard, painted with aluminum paint. Doll dressed as waitress.
5. Milk, King of Foods. Bottle of milk, crowned and enthroned on table with white streamers radiating to seven substances which represented the percentages of each of the foodstuffs contained in milk.

III. Stories
- "Romance of My Mother's Kitchen Cupboard," foods alphabetically arranged, with plants, countries, and uses.
- Letter telling of April Fool party, giving invitation, entertainment, and refreshments.
- "From Pig to Pork."
- "Visit Through Kellogg Plant."
- "Story of An Orange."
- "Story of A Banana."
- "What Mary Ann Cooked While Mother Was Away." (Week's menus with pictures.)
- "Foods from A to Z," with verse for each letter, naming food.
- "Grandmother's Recipe Book." This Grandmother had saved her favorite recipes for years, and was the proudest Grandmother in town when grandmother copied them all neatly and made a cook book.
- "Alice in Foodland."

One of the stories, written by Margaret Hudson, an eighth grade student, shows so much originality that we are publishing it here.

Alice In Foodland

By
Margaret Hudson
Urbana, Ill.

THE GOURD TUNNEL

Alice gazed over the broad counter fascinated. Before her were many objects of different sizes and shapes. There were many different colors and shades also. She wished she knew the names of them all.

"I'll just pick out those I know already," she thought, "that is an onion. I know because I have cut them and cried. And I think that long one is a carrot." Just then her eye caught sight of a huge green and yellow object and she grew a wee bit frightened. "What if he should swallow me," she said to herself. But smiled as she thought of something else, "of course he would choke to death if he tried to. Maybe I could eat a piece of cake or something, like Alice in Wonderland did and get out alright."

This Alice, you must know, was not the same Alice as that of Alice in Wonder-

land. She had read that book many times, though, and was rather proud she had the same name.

Her mother had brought her to the grocery store for the first time to-day. Alice loved to cook and most of all to help her mother get meals.

While she waited for her mother she leaned back in the chair her mother had left her in. It was very nice. She felt she was in a swing with a gentle summer breeze pushing her gently to and fro and softly tousling her hair. Suddenly she started because she heard someone calling her name. The voice was faint and far away. Alice sat still thinking she had been mistaken. No, she heard it again. It was a little clearer now.

"I guess I had better go and find out what they want," she said as she jumped down from the swing. As she jumped down she opened her eyes. Her mouth came open too, and she rubbed her eyes again. What she saw was surprising. There was a green hill with a circular opening that looked like an entrance to a cave. The surprising fact was that it was green and yellow.

Alice went to the entrance, and looked in. She couldn't see much but she thought she had better go in because the voice was calling her again and it seemed to come from there. She tripped merrily in and soon was lost from sight.

A STRANGE JOURNEY

On and on she went, sometimes walking, sometimes skipping. As she went she hummed a merry little tune. She seemed to have gone a long way for when she happened to look behind her she could not see the daylight of the entrance.

Finally she reached the end of the entrance or cave. She was surprised to find, not sunshine, but a roofed gallery or hall. The floor was smooth except for some little green rails running along the yellow surface. Alice was suddenly astonished to see a little train coming buzzing along the track. She heard a muffled voice cry, "All aboard," so she climbed in. No one was there except herself. The train shot along a tunnel very similar to that she had recently come out of. Then it buzzed into a station like the one she had just left and the muffled voice cried. "All out," so she climbed out. On one side was a huge crate and on the other a stool like one she had seen behind the counter in the grocery store. From the crate came an awful noise. It sounded like someone yelling to be let out.

"Well," she said, "I guess I'll take that stool over there and see what's in the crate."

So she climbed up and looked in. There she saw, sprawled in the crate a little fat, red-faced man who was pounding away and was red in the face with anger. "Let me out," he cried, "Let me out I say." So Alice helped him out and he began yelling "What was the fun of pushing me in there? I'll teach you better manners. Answer me, I say, answer me. Do you hear poorly or what?" When Alice got a chance to say something she told him that she didn't push him in, but helped him out. Then he became redder still with shame. "You see," he said, "That is a new crate and I was just looking in to see what it was like and somebody came up from behind and pushed me in there. Then they nailed down the box, I thought it looked like Tomato and Cucumber, the outlaws. Since you have on a red dress I thought maybe I was mistaken and that you pushed me in and nailed me in. So I got angry, I'm very sorry."

"What is your name," she asked, "mine is Alice."

"Mr. Apple," he answered, "just Mr. Apple. Call me Apple."

"Where are the rest of the people? Are you the only one living here?"

"People," he responded, "people? there are no people here, the only people who live here in Foodland are foods not people."

"Oh, I beg your pardon," she said, "but where are the foods?"

"They are at work," he said, "at six they will quit."

"What time is it now?" Alice asked, "It must be late." Pulling out a huge gold watch he said, after looking at it long, "It is now one minute 'till six." Then putting his watch in his pocket he said, "Come along we will go to meet them." So he took her hand and they started walking away from the station to see the other members of Foodland.

AN INTERESTING INTERVIEW

As they walked along Alice noticed big, red, round houses, with green shutters. They looked cosy and nice. Finally they came to a huge big building made of all colored cement. (At least it looked like cement.) Mr. Apple, led the way toward this building but all at once they heard someone yelling and following it they heard a great commotion. Out of the building running pell mell were all kinds of Fruits.

"You see," explained Mr. Apple, "This is Fruitalea. Because we are noted for making ale from the juice from different kinds of humans."

"Oh dear," exclaimed Alice, "I hope they don't make me into juice."

"They won't if I introduce you to them and," he added, "tell them how you saved my life."

With this assurance Alice walked along once more confidently.

"Alice," said Mr. Apple, suddenly coming upon a group of fruits, "these are some of my old friends, and my son! Mr. Apple Jr.—Miss Alice. Mr. Orange—Miss Alice. Mr. Banana, Mr. Grape, Mr. Grapefruit, Mr. Plum, Mr. Cherry, Mr. Apricots, Mr. Peach, Mr. Strawberry, Mr. Blackberry—Miss Alice. I am sorry some of the other 'Berries' aren't here. They are quite a distinguished family, but some are out of the country for a few weeks vacation. And here comes Old Mr. Cocoanut. He has quite a few whiskers and has a dark complexion but don't be afraid because he has a very hard shell and will protect anyone who is being wrongly harmed." Mr. Cocoanut came up just then and Mr. Apple introduced him to Alice."

Now Mr. Apple apologized to the fruits and Alice for having to hurry away so quickly but he had an appointment to which he was already late, so he left them to take good care of his friend Alice, and told how she saved his life. (Briefly).

Mr. Banana (called Banana for short) took charge of things.

"'Every man to himself,' (by which he meant, 'Every fruit be quiet until it is your turn to talk,') 'and when your turn comes tell your story.'"

He started out by telling his own then every single fruit got his turn to tell his story. Mr. Banana explained that he was always yellow because he travelled very much and always got sea-sick. He was always glad to reach port. And Mr. Peanut told how he was nearly roasted. He was there to represent all the other nuts in the nut family. Finally after a delightful evening Alice decided she had better go with Apple Jr. to his "apple" home for the night and she thanked them all.

MORE INTERVIEWS AND A TEA PARTY

Next morning Alice got up early and started for Vegetable Court. Mr. Banana took her part way and pointed out to her the rest of the way.

When she reached the Court she stopped at the first home she came to. It happened, that an orange little thin long man lived here. She knocked at the gate and was welcomed heartily. She also learned that the little man was Mr. Carrot. He invited her to his tea party. A few of his friends were coming. She said she couldn't stay long so he told her to help herself to the food that pleased her whim. The other guests would come later. She helped herself and hurried on. On her way she met Mr. Turnip, Mr. Beet, Mr. Lettuce, Mr. Cabbage, Mr. Parsnip, Mr. Bean, Mr. Pea, Mr. Asparagus, Mr. Radish, Mr. Cauliflower, Mr. Corn, Mr. Onion, Mr. Egg Plant, Mr. Spinach. Each of these told her (while she stopped a moment to listen) his story. She listened attentively but hurried on. When out of the city, she came upon Mr. Cucumber and Mr. Tomato who were camping together. Both were crying so

(Continued on page 106)

The School Lunch

Edited by **Martha Westfall,** Director of Homemaking, New York City Schools,
Josephine M. Adams, Assistant Director of Homemaking.

Emergency Lunches In New York City

By
Martha Westfall
and
Josephine M. Adams

IN the fall of 1930, when bread lines were growing longer and longer as jobs became fewer, the necessity for providing lunches for the children of the unemployed in this city became imperative. The Board of Education was alive to the situation and immediate steps were taken to provide for the pupils under their care.

Money for Relief

Through a city wide appeal by the Superintendent of Schools, Dr. William J. O'Shea, the needs of the public school pupils were made known throughout the school system. An average of 1% of the monthly salary was contributed by the teachers from the kindergarten through the high schools, by men and women in executive and supervisory positions, and by all other employees of the Board of Education. Money was expended, in the main, for hot lunches, milk and crackers, shoes and clothing. This article deals with one phase of the relief work, the hot lunch problem, and shows how the problem has grown and is being met.

The auditor of the Board of Education received the teachers' contributions and all drafts on this fund were made through the district superintendents.

Through conferences of the Associate Superintendent assigned to School Lunches and the Director of Home Making, it was decided that the first step was to determine where the need for hot lunches was the greatest. With this in mind, the district superintendents made a survey of the schools in their districts and a comprehensive view of the facilities of each school was furnished the Director of Home Making. This data was compiled from the following questions:

How many pupils in each school need the lunches? Can the lunches be sent from either of the two central kitchens in the Borough of Manhattan? Is there a place available for serving the lunches? Are there tables and benches already in the schools? Is there a gas plate? Is there a store closet for dishes? Is there an available place for washing dishes?

Serving the emergency lunches. Note the successful use of makeshift equipment

It is interesting to note that that complete report made in November, 1930 showed seven districts required no special emergency lunch relief at this time, and that the average number of pupils in the schools throughout the city, who did need this type of assistance, was only seventy-five. 1931 presented a problem of much greater magnitude.

It was felt, at the very beginning, that the most satisfactory way of serving these schools with hot lunches, of uniform quality and standard portions, was through the central kitchens. However, the relief committee decided that all money used for lunches should be spent only for food and none for overhead, and so, when the reports from the district superintendents were first received in November, 1930, there was no money available for transportation. It was necessary to eliminate the possibility of sending the food from the central kitchens. Three possible solutions were open; to send the pupils to the nearest school having the regular school lunch open, to send the pupils to the nearest charitable organization, such as the Children's Aid, Welfare Nurseries, etc., which was serving lunches; or to have the lunches prepared in the Home Making rooms by the teachers of Home Making. All three means were adopted and while they took care of a large number of schools throughout the city, many schools were still without any type of lunch service.

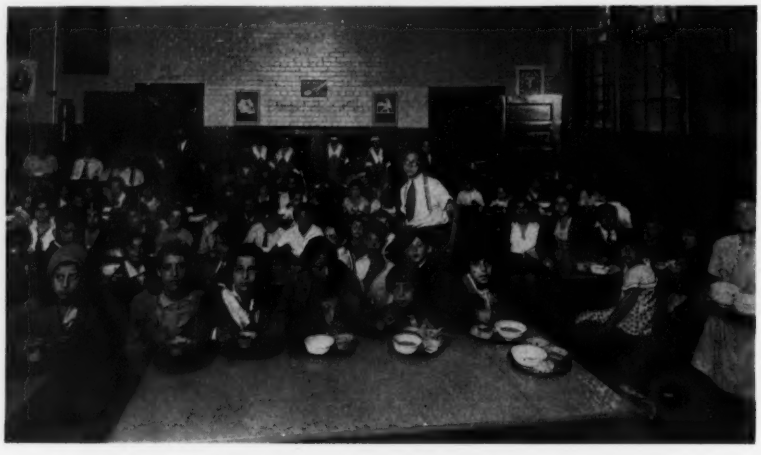
In December, 1930, Miss Mabel Hyde Kittredge, President of the Association of Housekeeping Centers, offered to pay through this organization, for the transportation of lunches from the central kitchens to those schools in greater need of the noon day meal. About the same time, a well known citizen of New York City offered the use of a truck for the same purpose. In this way, it was made possible to furnish thirteen additional schools from the central kitchens.

The Home Making Department was then confronted with the problem of supplying helpers to serve these lunches. At this time, a committee in New York City serving under the name of "The Prosser Committee" whose object was to find employment for men and women, offered to provide women for the purpose. The women thus employed in the school lunches received ten dollars a week, serving four hours a day for five days. They came from all strata of society but the members of the group, as a general rule, served in a satisfactory manner and were very grateful to have a job. Additional helpers were sent to the central kitchens to assist in the preparation of the food.

Each helper thus employed was required to hold a special Board of Health Food Handlers' License. It was felt at once that there must be adequate supervision of this emergency lunch service. Accordingly, the Board of Educa-

tion adopted a resolution releasing five teachers of Home Making for this purpose, assigning substitutes to fill these teaching positions.

These supervisory teachers were sent to the schools which were to receive lunches from the central kitchens. In many there was absolutely no equipment. For serving tables, old desks and tables were collected in the buildings. Planks were used to extend the table surface. In schools having no hot water supply except that in the custodian's quarters, a rubber hose was used to carry the hot water for washing the dishes. Storage facilities were invented by placing wooden egg or vegetable crates, one on the other, and compartments thus formed were used to accommodate the towels, cleaning cloths and materials, aprons, etc.



Emergency lunches are popular here!
(P. S. 67, Brooklyn)

The principals gave enthusiastic cooperation and many, personally, gave money to furnish gay oilcloth to cover the improvised lunch counters and tables. It is the unanimous opinion that the success of these emergency lunches is due to the expert and constant supervision given by these teachers of Home Making. Nineteen emergency lunches were thus established and operated and continued until the last school day in June, 1931, a total of 140,346 lunches having been served.

The dishes, spoons, extra utensils, aprons, and caps were supplied from the regular school lunch fund. No expense whatever was charged to the relief fund except the actual cost of the food which was covered by a charge of $.12 per lunch.

Because of lack of space only part of the menus used can be given here, but they show clearly the type of foods served.

Emergency Menus

The menus in the first group following are used only in the schools which prepare and serve the lunches in their own buildings, and in the special emergency central kitchens. Four menus were planned and served in rotation. This is a copy of the notice sent to those in charge of the work and using the menus.

"These menus are planned from the standpoint of nutrition and foods that can be prepared with limited equipment. It is advised that they be followed as closely as possible. In some schools, it may be necessary to omit the hot dish. In this case, the buttered bread or roll may be served with a generous filling of cheese, eggs, or fish.

"Experience in the food habits of children shows that many of the food on these menus are new to the elementary school child, but that the child can be first encouraged to try them and then trained to enjoy them.

"The results of these likes and dislikes of food, the learning to enjoy various foods, etc., will be compiled in a nutritional report in June. Your help in this matter will be greatly appreciated."

All the emergency menus were submitted to Dr. Mary Swartz Rose, Professor of Nutrition, Columbia University, and received her hearty commendation. The milk that is lacking in the menus is supplied in the schools directly.

EMERGENCY LUNCHES
MENU I

MONDAY

Cocoa
Spaghetti with tomato sauce and cheese
Whole wheat bread and butter sandwich
Canned plums

TUESDAY

Vegetable soup
Butter roll, white
Chocolate pudding served with milk

WEDNESDAY

Potato soup
Buttered carrots and peas
Rye bread and butter sandwich
Canned pears

THURSDAY

Macaroni and tomato soup
Egg and celery sandwich, whole wheat bread
Stewed apples

FRIDAY

Lima bean soup
Sardine, salmon or tuna fish sandwich
Fruit gelatine and two crackers, whole wheat

MENU II

MONDAY

Tomato and rice soup
Rye bread and American cheese sandwich
Canned pears

TUESDAY

Vegetable soup
Egg sandwich with celery, whole wheat bread
Stewed apricots

WEDNESDAY

Cream of pea soup
Canned corn
Rye bread and butter sandwich
Canned pineapple

THURSDAY

Tomato soup
Creamed potatoes and peas
Graham roll, buttered
Stewed prunes

FRIDAY

Cocoa
Lima beans with tomato sauce
Whole wheat bread and butter sandwich
Stewed apples

Extra Menus which may be substituted in order to use supplies or which may prove more popular in certain cases are given below.

Cocoa
Rice with raisins
Rye bread and butter sandwich
Fresh fruit and two whole wheat crackers;
Cocoa
Baked beans, canned
White roll, buttered
Fresh fruit;
Vegetable soup
Egg sandwich
Stewed apricots;
Split pea soup
Creamed cabbage
Sandwich
Fruit gelatine

EMERGENCY LUNCHES
Served from Central Kitchens
September, 1931 - June, 1932

MENU I

Note: All sandwiches to be buttered.

MONDAY

Cocoa
Carrots and peas
Cheese sandwich (American cheese with whole wheat roll)
Stewed prunes or fresh fruit in season

TUESDAY

Green split pea soup
Canned corn
Egg sandwich (use graham roll)
Canned pears, peaches or pineapple (Pineapple cut into small pieces)

WEDNESDAY

Vegetable soup
Canned peas

(*Continued on page 102*)

The Hot Lunch—A Health Factor

By
Dorothy Hanigan*
Jackson, Michigan

NO DOUBT at some time or other this question has presented itself to every home economics teacher, "Is the hot lunch a legitimate part of the home economics department's responsibility?" Here is an answer given by a teacher of home economics: "The units of the home economics course are developed around groups of home problems. Institutional meals are not home problems. However, the school lunch is a necessity and the physical conditions for serving it are in the home economics department. The lunch is a school problem in which the home economics teacher and her classes may cooperate."

A school lunch which is designed to use student help and to serve as an educational phase of foods classes must have an aim, and a definite plan of procedure. Lansing has worked out the following aim for their cafeteria course: "The aim of the cafeteria course in Senior High School is to give the pupil practice in large quantity cooking which will be of value in large group entertaining; to emphasize the need for application of nutrition principles in quantity menu planning as well as for the family meal planning; to teach students correct food standards and thus enable them to aid those they serve to select balanced meals; to give more direct contact with marketing problems than is usually possible in class room or home practice; and to acquire speed and accuracy in food preparation and service."

It is generally accepted that girls in a cafeteria class should not be required to wash the dishes. In a small school, where the girls assume all responsibility with the exception of dish washing, one hot dish is sufficient to serve. If teachers or school officials think it necessary to have larger lunches and are not able to supplement it by a packed lunch they should expect to make arrangements with a local restaurant or women in the community to serve lunches at noon.

Menus may be worked out several weeks or a month in advance and along with them suggestions for the lunch box to be published in the school paper or made known to parents by means of letters. In this way the child who brings a packed lunch and supplements it at the school may have a balanced meal. The hot dishes for one week may be as follows with variations for other weeks:

1. Cream of tomato soup—Monday.
   Variations—Cream of pea soup; corn chowder; cream of spinach; cream of celery; vegetable soup.
2. Escalloped cabbage—Tuesday.
   Variations—Escalloped corn; escalloped carrots; escalloped tomatoes; escalloped eggs; escalloped salmon.
3. Salads—Vegetable—Wednesday.
   Variations—Fruit, fresh, canned, or dried; cottage cheese.
4. Chop suey—Thursday.
   Variations—Beef stew; meat loaf with vegetables. lamb stew vegetables; meat pie vegetables.
5. Macaroni and cheese—Friday.
   Variations—Spanish rice; spaghetti and tomatoes; cheese rarebit.

In order that the girls will know how to prepare the foods for the hot lunch, class work should be given in advance at which time the recipe may be prepared in family amounts. The following is a plan which has been worked out by Genevieve Johnston as a term paper at Michigan State College following two years' experience with hot lunch. It will be quoted in part due to lack of space.

General Aim—

To carry on the hot lunch project in such a way that each pupil will get the maximum number of experiences in marketing, planning menus, and preparing food, and at the same time try to promote the health of the school.

Pupils Problem—

How can we carry on our Hot Lunch Project to benefit the entire school?

Situation—

The junior class of Sandusky High School studies foods the entire year and it is part of their routine to carry out a hot lunch program for ten weeks during the coldest weather. Some of the children buy only enough to supplement the lunch which they bring from home, while others buy the entire menu.

Organization—

The entire class has a double period (90 min.) every day. A system has been temporarily worked out whereby something different will be taught to the entire class each day. The menu will be planned a week ahead and the duties to be done for preparing the daily menu will be left on the teacher's desk and the tasks assigned. Aside from this there will be a "Hot Lunch Group" of five or six girls each week. A different group will be responsible each week and in this way the duties will rotate around the class. Each girl in the group will be responsible for certain things.

1. General manager—Sees that menus and orders are O.K. Does marketing for one week. Assists in seeing work is accomplished as planned.
2. Treasurer—Checks trays and takes in money. Sees that floor is clean.
3. Third girl—Sees that menus are posted. Responsible for bread box and stoves being clean.
4. Fourth girl—Calculates cost for each day.
5. Fifth girl—Sees that kitchen is left in good order.
6. Sixth girl—puts food away—keeps cupboards and refrigerator clean.

Menus should be made out on Thursday, O.K.'d by Friday, and marketing done on Saturday as nearly as possible.

Note: Starred (*) dishes are those made by entire group for experience. These are posted and rest of menu made by girls in charge for the week.

1. **Problem:** How can we prepare cream of pea soup—for hot lunch so everybody will like it.
   Procedure: Note—White sauce was taught previously in breakfast unit.
   15 minute discussion—Preparation of pea soup. Facts: Peas may be left whole or heated and mashed.
   Two vegetables other than potatoes should be eaten every day.
   Cream soups are usually made with thin white sauce.
   Other applications—Pulp from other vegetables such as tomatoes, potatoes, spinach, beans, and celery may be used the same way.
   Suggested menu; *Cream of tomato soup, crackers, pineapple tapioca pudding, cocoa or milk. Suggest—minced ham sandwiches brought from home.
2. **Problem:** (a) What is an escalloped vegetable, and which ones may be used?
   (b) How can we use up crusts and left-over bread?
   Procedure: 15 minute discussion—Scalloped Vegetables.
   Scalloped vegetables are placed in a butter baking dish—may be alternated with layers of bread crumbs.
   Bake uncovered in a hot oven 400 degrees F. for 45 minutes or until crumbs on top are brown.
   Soft bread crumbs—use 1 T. butter melted to 1 cup soft bread crumbs.
   60 minutes—Groups of girls prepare scalloped corn and other duties listed for today's menu.
   15 minutes: Clean up.
   Suggested menu: *Scalloped corn, peanut butter sandwiches (from home), cabbage salad, apple sauce, cookies, cocoa or milk.

* Reprinted from News Letter, Michigan Home Economics Assn.

3. **Problem:** What kinds of salad shall we serve for hot lunch?
What are soup sticks?
Procedure: 15 minute discussion—Salads.
1. Relation to rest of meal
a. Dishes included in a luncheon
b. Types of salads
2. Available fruits at this season.
*Fruit salad—preparation.
Planning balanced meals.
60 minutes—preparing day's dishes.
15 minutes—clean up.
Suggested menu: Creamed spinach soup—soup sticks, sandwiches—chopped egg, *fruit salad, cocoa or milk. (Soak prunes for tomorrow.)

4. **Problem:** (a) Can we afford to have some salad every day? When could we do without it?
(b) Where should food be placed in the refrigerator?
Procedure: 15 minute discussion—
(a) cost of materials for various salads—canned, dried, and fresh.
(b) Placing food in refrigerator.
One-half class plan menus for next week, recipes and cost.
One-half class prepare day's dishes.
Suggested menu: Chop suey; sandwiches—lettuce and bacon; stuffed prune salad; hot chocolate or milk.

5. **Problem:** (a) We use a great many canned foods in hot lunch. What is the cheapest way to buy them?
(b) What do we need to know about marketing to do it efficiently?
Procedure: 15 minute discussion—marketing. Girls suggest asking their mothers and inquiring at different types of stores.
Facts:
1. Sizes of cans
2. Number of servings in each
3. Figure cost per serving for hot lunch for each type purchased.
60 minutes—Prepare day's dishes.
Suggested menu: Creamed chip beef on toast; sandwiches—date, nut, cheese; Waldorf salad; chocolate pudding; cocoa or milk.

Abilities Promoted Through Class
1. To plan a balanced diet at low cost.
2. To prepare and serve food attractively.
3. To prepare foods quickly and neatly.
4. To market intelligently.
5. To change a recipe to to do quantity cookery.
6. To select foods valuable for vitamins, minerals.
7. To use left-overs attractively.

Appreciation Gained From This Project
1. Appreciation of the relation of food to health.
2. Appreciation of the value of milk and hot dishes in our lunch.
3. Appreciation of thrift.
4. Value of a balanced diet.
5. Appreciation of high standards of cleanliness in preparing and handling food.

Planning Balanced Menus

By
Charlotte Peters
Neenah, Wisconsin.

ONE of the most significant recent developments in the public school program has been the increased realization of the importance of health education. Within the past two years the rapid growth and development of the present cafeteria system is a practical application of one phase of health education and is the direct result of a need of proper food for health for every school child.

The primary aim of this cafeteria is to furnish to the child at the least possible cost, without profit, a nutritious, wholesome lunch, so that he may be better nourished, more contented and in better physical condition and that he may lay the foundation for life health habits.

For uniformity, it has been found that a 4 cent dish is most satisfactory. Our luncheons consist of substantial main dish, a starchy vegetable, a green vegetable, a raw vegetable, and fruit in salads of various kinds; meat, cheese, peanut butter or egg sandwiches, (using coarse grained bread); creamed and vegetable soups (choice of two or three); stewed fruits, baked apples; raw fruits, and simple desserts such as puddings, gingerbread, and plain cake. Pies are served but once a week, milk, chocolate milk, and cocoa every day. The main dish is planned to furnish the child with enough food value for the better part of the school day.

Large quantity buying, simple organization, careful planning, and the absence of waste have aided in making the cafeteria a success. At this time we are breaking even with a small "safety fund" to cover any unforseen losses. The cafeteria system is absolutely self sustaining.

A typical menu served in the Neenah High School is given below. Each item is priced at 4 cents except the sandwiches which are 5 cents.

Tomato Soup	Stewed Apricots
Vegetable Soup	Bananas
Mashed potatoes	Fruit salad
Baked Beans	Apples
Spinach	Oranges
Squash	Sandwiches:
Vegetable salad	chopped meat,
Celery	cheese,
Baked apple	egg,
Cottage cheese	peanut butter,
Jello	jelly nut
Pudding	

Fresh eggs, butter, and fresh wholesome milk are used throughout the year for cooking purposes as well as serving.

School age children are sometimes more susceptible to appeal than to hunger. These facts have been taken into consideration and the result proves that going beyond dietetics in handling this problem we are able to build a large and better demand. Our dining room is very attractive—the walls are beautifully finished in tones of tan and brown, the tables, seating four and six, are nicely stained and varnished and have as a center piece a vase with bright, cheerful, and attractive flowers.

We can seat 150 students at one time. During the very cold months it is necessary to have two shifts. Ordinarily we have an average attendance of 70 students each day. Those carrying their own lunches are in a separate group and usually get one or two hot dishes at the counter.

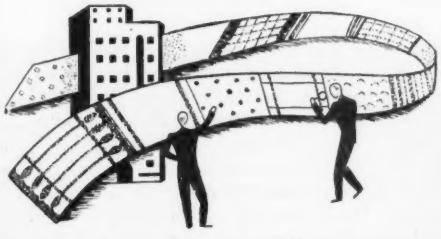
Employed in our cafeteria are one cook and her assistant, one high school girl who helps me serve, and another as cashier. The cook and her assistant work from eight until four every day. When not cooking they are cleaning, polishing, and keeping the cafeteria immaculate. I help with the serving at meal time to supervise the selection and buying by the students. I also plan the menus and supervise the preparation. A monthly statement covering all expenses and amount of income is made out and turned over to the School Board.

Each afternoon a paper is placed on the bulletin board and is left there until ten o'clock the next morning for students to sign. This paper is divided into two columns—one for a complete meal and one for separate dishes. In addition to this we have a list of regulars who are with us every noon. The students are checked every noon by a faculty member—so those who have not signed are put at the end of the line. By doing this we know exactly how many we are to take care of that particular day. So far as possible, careful study has been made of the dishes the children like and to these are added the necessary vegetable and fruits for correct balance.

The equipment in our cafeteria work room is quite complete. We have an electric dishwasher, mixer, and refrigerator, a potato peeler, and sufficient table and sink space. A store room adjoining the work room is for supplies. As supplies are received, they are personally inspected by the cook and after they are checked they are put in their respective storage spaces.

We buy all our groceries from retailers, getting 5% discount from most.

GETTING Some wear WITH TOWELS



TOWELS, like people, can't be known until you live with 'em. They may look like five dollars on the sales-counter—but wear like two cents in the home.

To test wear in towels one of the country's leading hotels assembled various well-known brands, sewed them together in a long sheet, and washed and ironed this sheet a hundred times. (That's skepticism for you!)

The Cannon section showed far less wear than any other. Even after this modern inquisition the fabric seemed as fresh and soft and ready for service as when it was brand-new. Some of the other towels were decidedly worn, and many had frayed.

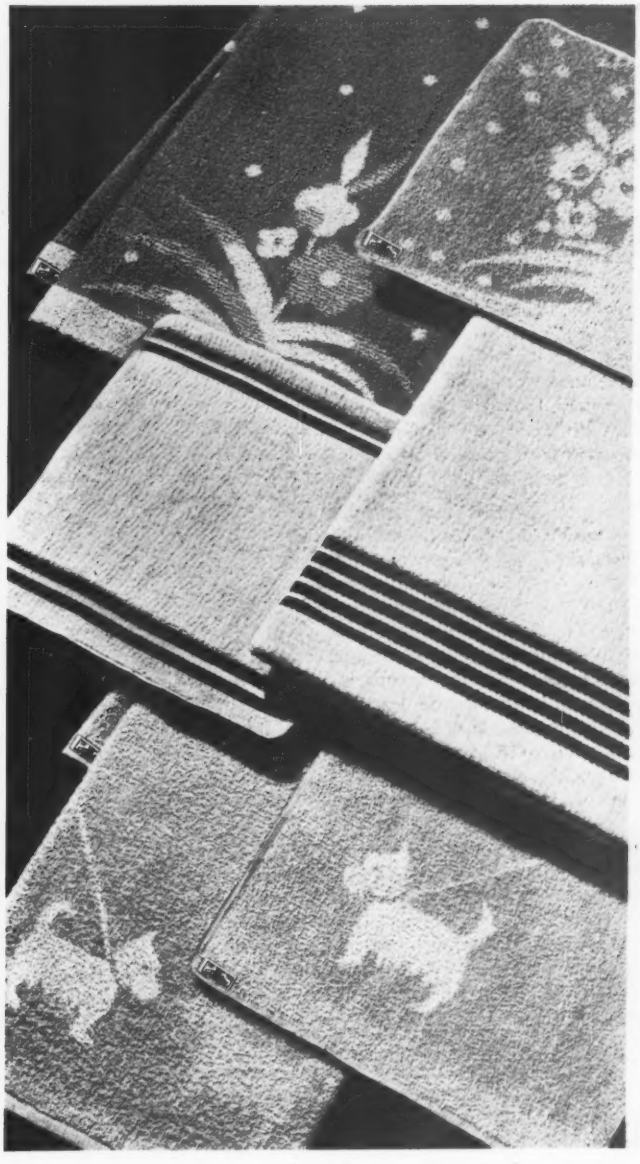
The hotel that made this test now uses Cannon towels exclusively. In fact, most hotels do—they rely on the Cannon name as signifying the *best*. Most wise housewives do too.

• • •

Do you know how to bathe? Really scientifically? How to relieve fatigue by a bath? Reduce nervous tension? When to take a hot bath, a cold bath?

Bathing is more than simply sitting in a tub—much more, as you'll learn if you send for our interesting booklet, "10 Kinds of Baths." It discusses scientific bathing. Write for it, addressing . . . Cannon Mills, Inc., 70 Worth Street, New York City.

Cannon towels are manufactured in accordance with Simplified Practice Recommendations No. 119-31 U. S. Department of Commerce Bureau of Standards.



CANNON

TOWELS

Abstracts from Current Periodicals

A College Experiment in Adult Education by Arland D. Weeks, Dean, School of Education, North Dakota Agricultural College, Fargo, in Journal of National Education Association, November, 1931, discusses the "unit" or layman's courses offered by the North Dakota State College in its 1930 summer school. The controlling idea was that adults might wish to consult a college summer school as a sort of reference book by attending classes for a while, but without being expected to spend a full term. These one week courses could take up only a few of the high spots of a subject and were therefore very popular and had a vitalizing effect on the college. The registration for the entire summer school was almost double that of the preceding year,—attracting physicians, clergymen, teachers, farmers, club-women, insurance, and others, and even the regular college students who wished only the simple unit information on some subjects. Instructors found it necessary to judge their lectures more critically and with a keener sense of practical standards.

Standardization Trends in Food Administration, by Isola Denman, University Hospital, Ann Arbor, Mich., Journal of the American Dietetic Association, September, 1931, discusses food costs in institutions and their controlling factors; menu planning, unit standardization, purchasing, and ultimate consumption. It is only through definite correlation of these factors that such food costs may be satisfactorily controlled. Charts are given showing the development of a long time plan of menus, built up around the schedule of meats. Then the vegetables and desserts are chosen with respect to the meat. In each case the season and the special values of the dish must be considered. Methods of figuring out the cost of dishes per portion are given, such tabulated data enabling the dietitian to plan weeks ahead. There are also charts of advanced food orders and purchase charts.

Adequate Deitaries for Sororities and Fraternities, by Bessie Brooks West, Journal of the American Dietetic Association, September 1931, explains how a college can meet its obligation for maintaining healthful dietaries in organized houses without an increase in cost. The planning and preparation of food in sororities and fraternities is in general done by persons without nutritional training and the small number in such a group makes the furnishing of economical and satisfactory meals an especially difficult problem. Casual scrutiny of the dietaries in 20 such houses showed that protein was sufficient and the energy probably adequate, but the calcium and phosphorus were inadequate in 70% and iron in 50% to 60%. There was also a marked deficiency in vitamins. The food served these groups was less adequate than that furnished the inmates of the state penitentiary though the average food cost was twice as high.

Kansas State College has developed a system whereby the Department of Institutional Economics makes available the services of a food director who plans balanced, palatable meals, purchases the food supplies, gives limited supervision to its preparation, and keeps a record of the food costs for each of the cooperating groups,—for a minimum charge of $10 a month to each group. Food costs are reduced by buying wholesale for several groups at the same time.

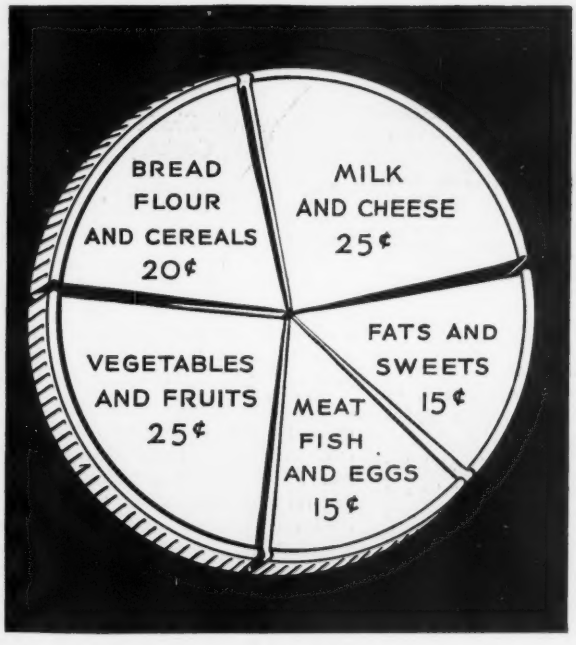
Relief Feeding of School Children on a Vast Scale, in the Red Cross Courier, September, 1931, tells how the Red Cross introduced hot lunches into many of the schools in the badly stricken districts when the peak of the drought was reached early in 1931. Out of the 22 states affected, all but nine at some time were serving hot school lunches. The children served in 3,524 schools was 184,459, out of a school attendance of 529,732, or more than 30 per cent. The lunch usually consisted of a bowl of soup and a slice of bread, the cost per child averaging about 3 cents. School attendance was stimulated and quickened intelligence, in play as well as in work, corresponded with physical improvement. There was marked gain in weight,—in one case an average of 4.6 pounds was gained in a group of 676 children, and in another the gain among 47 pupils was 399 pounds.

This Is Station WOI, by Ruth Ellen Lovrien, in the Iowa Homemaker, November, 1931, tells of the "Homemakers' Half Hour" broadcast from station WOI at Iowa State College. This station is one of the most popular in that section of the country and is famous for its educational programs. These include market and weather reports, musical programs, book reviews, athletic events of the college, and educational material presented by recognized authorities in their special fields. During the year each member of the Home Economics faculty has an opportunity to speak on some part of her special line of work. Material must have educational value and entertainment qualities, be timely, and be effective without charts and stage effects. Hundreds of letters are received in response to these home economics talks and thousands of mimeographed copies of the speeches are mailed on request. A series of art appreciation talks last year was so popular that it is being repeated this year.

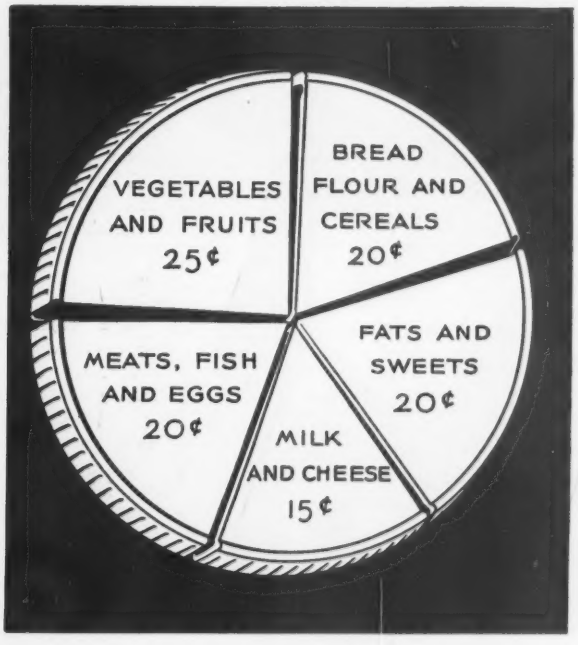
Technical Standards for Consumer Goods—a "Five-Year Plan"? by P. G. Agnew, Secretary, American Standards Association, New York City, Journal of Home Economics, December, 1931. In teaching the consumer to buy according to specification the objective is not enough,—there must be a comprehensive plan and definite program for putting it through. Intensive education of the public in the use of standards is necessary if these standards are to be worth the effort of working them out and setting them up. There is a lag in research and investigation on the part of manufacturers who claim their specifications are not used by the consumer, who instead, goes by the brand name which it has cost a great deal to build up,—too much to discard without careful consideration. A five-year plan or campaign is suggested to acquaint the public with buying specifications for various commodities through instruction in schools and clubs and from retailers, etc. This five-year plan should include intensive research extending to the commodities all around us to develop standards for them, thus bringing up the quality level of the goods and extending the possibilities of mass production.

What Is Effective Teaching of Foods Classes? by Jane S. Hinkley, Home Economics News, November, 1931. This gives a basis for evaluating effectiveness of teaching in food classes. Emphasis should be laid on the effort put out by the students in finding out facts for themselves in relation to practical problems or actual situations. The student should be taught to think,—to puzzle out the requirements of foods for health and to meet food responsibilities as they exist in the home. Information is often simply handed out to be absorbed without question or criticism or with ready made discussion. Probably one reason why some girls seem little interested in home activities is because they are directed to do some small isolated part of a home problem while someone else makes all the plans and decisions. Facts and principles and processes are taught apart from the situations where they function and with entire disregard for the economic and social factors involved.

DIVIDING THE FOOD-DOLLAR



This chart shows the proper division of the food-dollar when there are children in the family.



Here is the chart to follow for the food-budget when the family consists entirely of grown-ups.

HERE are two interesting charts — prepared from information published by the U. S. Department of Agriculture. They show how to divide the food-dollar to insure adequate nourishment for each member of the family.

Cereals are important in these two budgets. For cereals furnish vital elements to the diet. They are easily digested. They are economical.

Kellogg Cereals are famous for their flavor and healthfulness. Eaten with milk or cream, they help keep the day's meals in proper balance. PEP Bran Flakes have just enough bran to be mildly laxative. Kellogg's Corn Flakes are particularly good for after-school snacks and children's light suppers.

The Home Economics Department of the Kellogg Company has prepared special material on the subject of food-economy. Particularly interesting are the *Economical Menus for One Week.* These menus can be served at a cost (in some sections of the country) of as low as $7 a week for a family of five. Have us send you free copies. Mail the coupon below.

Kellogg's FOR HEALTH

Kellogg Company, Battle Creek, Mich., makers of Corn Flakes, ALL-BRAN, Rice Krispies, Wheat Krumbles, PEP Bran Flakes, Kellogg's WHOLE WHEAT Biscuit—also Kaffee Hag Coffee—*real coffee that lets you sleep.*

Dept. V-3

Home Economics Department
KELLOGG COMPANY, Battle Creek, Mich.

Please send me____free copies of your *Economical Menus for One Week.*

*Name*_____

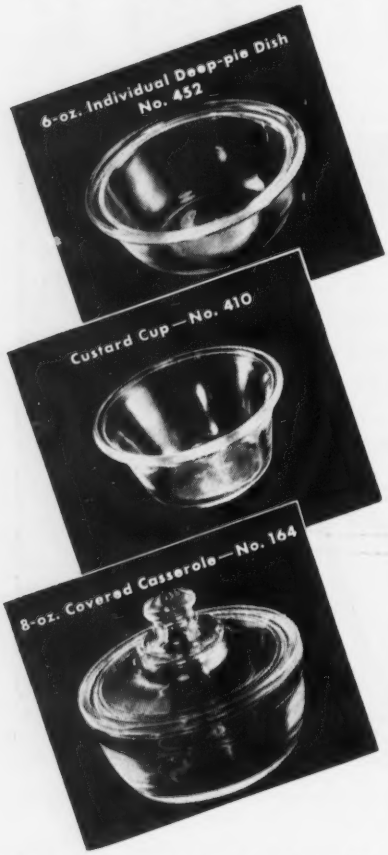
*Address*_____

*City*_____ *State*_____

Outfit the class with

PYREX WARE

Now only **90¢** *a set!*



"Replacements total only $5.00 after 5 years," says teacher

We didn't select this set ourselves — we put it up to the experts . . . Asked 43 Home Economics Directors to name the Pyrex dishes they like best and use most often.

They chose the 3 shown here. And all we did was to put on the tempting low price tag *"90¢ for the set."*

This 8-oz. covered casserole, 6-oz. individual deep-pie dish, and custard cup that these Directors recommend are great favorites with the *students*, too . . .

For these dishes of Pyrex Brand Ovenware give complete *visibility of contents* when baking. Prevent the disappointments of scorched or undercooked foods.

Your dealer has this set at 90¢, and many other low-priced Pyrex dishes. Every piece carries a two-year replacement guarantee against breakage from oven heat.

PYREX OVENWARE

10¢ . . . 20¢ . . . 30¢ . . . *and up*

"PYREX" is the registered trade-mark of Corning Glass Works and indicates their brand of resistant glass. Prices slightly higher in the West and Canada.

Home Economics Exchange

Creating an Interest in Home Projects

When I am asked what is the most difficult part of the home economics program, I promptly answer, "putting across the home project in a way that will interest and benefit the pupil and the family."

The girls in the community of Denton, North Carolina, took canning as one of the main summer projects. The projects were discussed and planned with each girl in the early spring, so that they might can a variety of foods. Balanced diets were planned including available home products.

The value of fresh vegetables was stressed. Many of the pupils took the vegetable garden as part of the canning project. At least two vegetables which had not been used in the home were planted.

The projects were checked the latter part of August. The many cans of fruits, vegetable, jellies, and pickles were neatly arranged in the cellar, attic, or pantry. A number of the girls had a new storage place built.

As a stimulus for the girls and for the members of the community to see what was being done in project work, an exhibit was planned in September. All canning and clothing projects were exhibited in the home economics building. Three judges were appointed, and prizes were given for the first and second and third place of each canned food and garment exhibited. The prizes were donated by the town people and awarded by Mrs. R. A. Allen, a member of the county board of education.

As a result of the exhibit the pupils seem to be more interested in project work.

1. They plan the procedure more carefully.
2. They keep more accurate records.
3. More careful to have Mother's signature.
4. They keep the records neater.
5. They are more anxious for home visits.
6. They are more interested in story of project.

Lillian Bell
Denton, North Carolina

Color in the School Kitchen

An attractive room appeals to anyone, but particularly to high school girls. Make the school kitchen an interesting room by carrying into it some of the principles learned in studying color. Paint the inside of desk drawers and cupboards of soft green, or a sunny yellow, depending on the location of the room. Have the supply dishes an interesting color harmony—colored oilcloth, a colored pottery pitcher of interesting shape, handles of knives, ladles, etc., in the predominating color all tend to bring interest.

Leila Maxwell,
Jamestown, North Dakota

A Seventh Grade Project in Cookery

In a seventh grade class of cookery which meets only once a week we have very little time to spend on the non-practical side of cookery. I have found one way in which we can cover a great deal of ground, arouse interest in the class itself, the faculty, and also in the students who do not take Domestic Science. The class is divided into groups of four, each with a captain, this making about seven groups. Each group is responsible for a wall frieze about five feet by three feet dealing with some general food idea. Among those we have used are "History of Bread," "Milk," "Sugar," etc. All the work is done outside of class, the girls getting pamphlets, pictures, exhibits, writing compositions, drawing pictures and assembling their work. When finished these are put up in the large assembly hall for the whole school to see and a committee chooses that one which they consider the most interesting. The best ones are then arranged in the Domestic Science laboratory as part of the year's permanent exhibit.

Edith Estarabadi
Orange, N. J.

Managing Canning Lessons

This year the second semester Foods Classes at Central High School canned entirely for homes. Six different families brought their raw products with cans, rubbers, etc., and returned later for the finished product.

This helped the department a great deal in lessening expenses and at the same time it gave the students quite thorough practice in cold pack and open kettle methods of canning both tomatoes and peaches. Grape juice, peach chutney, pickles and jelly were made as well.

Vera Wilson
Lansing, Michigan

NEW BISCUITS

"All Dressed-Up"

They're easily made from a simple basic recipe— and, of course, baked with* ROYAL *for perfect results

1. An interesting filling of chopped figs, brown sugar and lemon juice transforms these plain biscuits into delicious Royal Fig Rolls.

2. Simple baking powder "pocketbook" biscuits become California Orange Rolls when a sugar-dipped section of orange is baked in each.

3. Ordinary baking powder biscuit dough — rolled up with a filling of sugar, raisins and nuts— makes these Royal Nut and Raisin Rolls.

TEACHERS insist on Royal Baking Powder for classroom and demonstration work. They know that Royal is uniformly dependable . . . prevents failures and wasted ingredients.

For Royal, you know, is not like ordinary baking powders. *Cream of Tartar* is what makes it different.

A pure fruit product derived from grapes, Cream of Tartar has long been recognized as the finest ingredient from which baking powder can be made. Food experts and dietitians prefer a Cream of Tartar baking powder because it insures wholesome, nourishing baked foods.

For more than 60 years Royal has been the world's standard of baking powder purity and dependability. Biscuits, quick breads, muffins, cookies and cakes made with this famous Cream of Tartar baking powder invariably come from the oven light and even-textured, with a delicious *blended* flavor.

. . .

And Royal is not expensive. You can make a whole batch of biscuits with less than 2¢ worth!

Free Cook Book:

Mail the coupon today for free copies of the Royal Cook Book for class use. It gives the complete recipe for Royal Nut and Raisin Rolls, and many other equally tempting hot breads.

ROYAL BAKING POWDER
Product of Standard Brands Incorporated
Dept. 162, 691 Washington Street, New York City

Please send me free.....copies
of the Royal Cook Book for class use.

*Name*_____

*Address*_____

*City & State*_____

*Name of School*_____

Emergency Lunches in New York City

(Continued from page 94)

White roll buttered, made into fish sandwich
Fruit cup

THURSDAY

Lima bean and barley soup
Stewed tomatoes with bread crumbs
Buttered graham roll
Chocolate pudding served with milk

FRIDAY

Cocoa
Italian spaghetti with onion and tomato sauce, with grated cheese, (extra)
Whole wheat roll and butter
Canned pineapple or other canned fruit

EMERGENCY LUNCHES

MENU II

MONDAY

Cocoa
Rice with tomato sauce and onion
Buttered graham rolls and one cube of American cheese
Stewed fruit or fresh fruit

TUESDAY

Vegetable soup
Stewed tomatoes with bread crumbs
Egg sandwich on graham rolls
Chocolate pudding, vanilla sauce

WEDNESDAY

Cocoa
Salad (tuna fish or salmon with celery)
Buttered white roll
Bread custard pudding with raisins and vanilla sauce

THURSDAY

Cream of split pea soup
Macaroni with tomato sauce and cheese
Rye bread and butter sandwich
Apple sauce or fruit gelatine or fruit cup

FRIDAY

Cocoa
Stewed corn
Whole wheat bread and butter sandwich and cheese
Fresh or stewed fruit; two crackers
All menus subject to change May 1, 1932.

Emergency Lunches Provided by the Regular Home Making Classes.

In addition to the emergency lunches furnished through the central kitchens, welfare organizations, and by the regular school lunch cafeterias, many teachers of Home Making prepared and served lunches to the needy children in their respective schools, fifty schools being thus cared for. In nearly every school, outside contributions of money and material were given. The average cost per lunch was thus reduced to $.1028, this being paid from the teachers' relief fund. A total of 563,985 meals were served. In some cases, breakfasts as well as lunches were served. It must be understood that the regular Home Making programs, in most cases, were not materially disturbed. The meals were planned to include and supplement the foods prepared in the scheduled Home Making lessons. Family quantities were cooked instead of the smaller amounts.

1931—1932

When the schools opened in September, 1931, the demand for additional school lunches were so urgent that approximately three hundred new lunch centers had to be opened. This meant that not only food but equipment and helpers must be provided. Again an appeal was made to the teachers, administrative staff, and all other employees of the Board of Education for funds to finance this extending relief work, with the result that from 2% to 3% of salaries was pledged. It became imperative that not only food but also equipment be purchased from this fund, as the regular school lunch resources were not adequate to carry the increasing burden. It was found that in addition to supplying the regular school lunch centers, fifty-five more schools were all that could properly be served from the two central kitchens. The responsibility for purchasing supplies and equipment for these three hundred new centers was shared by the Director of the Bureau of

PLAIN ROLLS with bread dough raised with YEAST FOAM or MAGIC YEAST — so sweet, so light and delicious they almost melt in your mouth!
Just the same except in name
Package of five cakes at your grocer's
10 CENTS
MAGIC
YEAST
YEAST FOAM
YEAST FOAM

Baking at home *helps to cut down the Food Bill*

AT A TIME when the money spent for food must be budgeted very carefully, it is well to keep in mind that baking bread at home is good economy. Then, too, bread furnishes more calories at a lower cost than almost any other food.

It is therefore advisable to use bread liberally in the diet and to bake it at home.

By using Yeast Foam or Magic Yeast for making bread you will have the satisfaction of turning out loaves beautiful in appearance and with that delicious wheaty flavor which makes bread a genuine treat.

Our illustrated booklet, "The Art of Making Bread," tells exactly what to do to insure success. Copies of this booklet for class distribution will be sent, free of charge, if number required is specified in teacher's request.

Our Home Economics Department will also furnish to teachers, if desired, an Outline of a Course in Bread Making, Basic Recipes for a Variety of Breads and Rolls and a Bread Lesson Wall Chart.

NORTHWESTERN YEAST COMPANY
1752 North Ashland Avenue Chicago, Illinois

Attendance. Trays, bowls, spoons, and cooking utensils were purchased by the thousands; food was brought in such wholesale quantities that a minimum charge to the School Relief Fund was possible. The Home Making department served in an advisory capacity in purchasing these foods and equipment and also furnished the menus and recipes. Stoves were set up in the school basements, gymnasiums, or wherever there was any available space. The supervisory teachers of Home Making was given city wide supervision and on February 1, 1932, three additional teachers were added to this group. In the Borough of Queens a special emergency kitchen was equipped and one of the Home Making supervisors was detailed to organize and direct the distribution of lunches to schools in the outlying districts of this borough. Another special emergency lunch kitchen is now being organized for the Harlem district of the Borough of Manhattan. It is the concensus of opinion that the central kitchens as operated by the Home Making department for twelve years provide the most feasible method for dispensing emergency lunches.

It is obvious that sending raw food materials to central kitchens is much more efficient than trying to distribute it to a great number of individual schools. It is more easily checked and supervised as to quality and quantity.

The Gibson Committee which replaced the Prosser Committee furnished helpers until their peak was reached, and while still able to pay the weekly wages of the helpers appointed, they were not in a financial position to add to their payroll. This meant that all helpers employed for lunch centers after January, 1932 must be paid from another source. In addition to this, the number of pupils needing help has been steadily increasing, not only for lunches but also for clothing and shoes. The school group has again been appealed to, to increase its monthly contributions. As it now stands the Teachers' Relief Fund finances the purchasing of shoes, clothing, food equipment, helpers as well as transportation of food from the two additional emergency kitchens.

One of the problems that is outstanding in the preparation of these lunches is that many of the cooks and helpers are not only untrained, but have many and varied standards of good food and sanitation.

Strict regulations have been made and mimeographed instruction sheets are sent to all schools serving the emergency lunches, outlining plainly rules that must be followed by all those handling and serving lunches. Lack of space prevents giving the details of these here.

Each day brings its discouragements and what seem for the moment to be unsurmountable obstacles. But every morning means a new day and yesterday's worries are cleared away to make way for fresh ones to follow. Even the weather often seems to conspire against the lunches and when perfectly good rice pudding leaves the kitchen only to sour on the way, and when innocent beans decide to ferment in the humid atmosphere, or when in the individual kitchens the soup burns when the cook's back is turned, then problems of international importance seem but trifles in comparison with the troubles of those responsible for feeding hundreds of hungry children.

Chemical Yarns

(*Continued from page 83*)

ever, to "rayon and other synthetic textile fibers."

Although many of the manufacturing companies have accepted the word rayon others—notably the manufacturers of Celanese and Bemberg yarns—have preferred to apply their own trade names to the products which they make because of the differences in characteristics between these years, made by other processes. Since the use of the term rayon is voluntary, and not mandatory, manufacturing companies may follow their own inclinations

CARNATION CHEESE SAUCE

¼ lb. American cheese

1 cup Carnation Milk

Scald milk over boiling water. Add cheese that has been cut into small pieces. Continue cooking until cheese is melted, about 5 minutes, stirring constantly.

A Delicious short-cut cheese sauce made in a jiffy—usable a dozen ways

Just Carnation Milk with American cheese melted into it. Can you imagine a simpler recipe? Yet it tastes anything but simple—has the flavor and texture and smoothness of an elaborate rarebit.

And think how many ways you'll use it—poured over toast, served as sauce on vegetables, with grilled tomato and bacon sandwiches, or in the preparation of au gratin potatoes or macaroni.

This recipe shows you how Carnation Milk saves time. It saves in other ways—in food spoilage, because it is always pure and wholesome; in extravagant use of butter and cream, because of its double cream content; in convenience, because you can keep it in any quantity, on your pantry shelf. And it is the most economical form of milk you can buy.

Send for the free Carnation Book of recipes. Ask, too, for the Carnation Baby-Feeding Book, telling why the greatest authorities recommend Carnation as an ideal milk for bottle-fed babies. Address Carnation Company, 747 Milwaukee Gas Light Building, Milwaukee, Wisconsin; 848 Stuart Building, Seattle, Washington; or Aylmer, Ontario.

"From Contented Cows"

Carnation Milk

Copyright, 1932, by Carnation Co.

WORLD'S LARGEST-SELLING BRAND OF EVAPORATED MILK

BOB EVANS

. . . "THE BIGGEST NAME IN UNIFORMS"

Below: No. 1603. Vat dye linene in blue, green, lavender, maize, and rose. Buttons down front. Standing collar. Princess flare, front and back. In short sleeves only—$1.95.

Above: No. 1651. Princess flare skirt. Short sleeves. Scalloped down front. White Mercerized Broadcloth. No. 227—Same model in White Nurses' Cloth—$1.95.

Bob Evans
THE ARISTOCRAT OF
UNIFORMS

Bob Evans' smarter styling assures chic, dashing attire for classroom and home. . . . Crisply tailored from sturdy, long-wearing fabrics—all Bob Evans garments will survive countless launderings. . . . In addition, every Bob Evans Uniform features detachable pearl shank buttons. . . . Look for the Bob Evans label!

Write for Style Booklet 3HE Showing New Models from $1.98 up. Sizes 14, 16, 18 and 34 to 46

JACOBS BROTHERS, INC.
1501 Guilford Avenue,
Baltimore, Maryland

Please send me style booklet 3HE.

Name .....

Address .....

City and State.....

Health Education

(Continued from page 88)

4. A good breakfast furnishes food of:
   (1) Proper kind for growth and health.
   (2) Sufficient in amount for share of day's activities.
   (May be designated as an "A" breakfast.)
5. A good breakfast may consist of fruit, milk, cereal, toast and butter. Other foods as bacon, eggs, jelly may be added.
6. There is a very definite shortage of food for the day if breakfast is omitted or if the meal is a light one. It is difficult to eat enough food at the other two meals, even when there are between-meal lunches. Lunching takes away the appetite for regular meals and in the long run, the total food is less.
7. Cereal breakfast foods and bread are suitable for breakfast because
   (1) They give energy.
   Butter on toast and milk or cream on breakfast food increase the energy as well as add to the flavor.
   (2) When cereals are of the whole grain variety they furnish:
   Iron, to make blood red.
   Roughage, which gives to the food and acts as laxative.
8. When one comes to breakfast, as to all other meals, it is important to be clean, particularly to have clean hands.

Bibliography

Books for pupils:
Emerson and Betts—"Living at Our Best" (Bobbs-Merrill)
Burkhart, Chambers, Maroney—"Personal and Public Health 7 and 8" (Lyons and Carnahan)
Winslow and Hahn—"New Healthy Living" (Charles E. Merrill Co.)

Materials for Pupils:
Guide to Balanced Meal Planning—National Dairy Council, Chicago.
Grain Through the Ages—Quaker Oats Co., Chicago.
What Milk Did for 41 Boys—National Dairy Council, Chicago.
Milk Made the Difference—National Dairy Council, Chicago.

Books for teachers.
Roberts—"Nutrition Work With Children"—University of Chicago Press.
Harris and Lacey—Everyday Foods (Hougston-Mifflin Co.)
Wellman—Food Study for High Schools (Little, Brown & Co.)

Materials for teachers:
Sent by the National Dairy Council, Chicago, on request for materials for nit III in Health Education Course.

The Gift of God

(Continued from page 86)

In early spring Czecho Slovak peasants, led by the priest, go in procession to the fields, there to bless the standing grain. Around and around the fields they march, with droning hymns, waving banners and garlands of fresh wild flowers. The priest invokes God's blessing, begging the saints to protect the corn and grant a plentiful harvest. Sometimes the holy man sets the image of St. Mark in the midst of the field, for, as the Slovaks say, "If Maracek hides in the grainfield, the year will be a good one!"

Shortly after the toils and cares of the harvest, the Slavic peasant begins preparation for the Yuletide festival, when not only grain, but bread and foodstuffs made from it, form a dramatic climax to the year devoted to their production.

On Christmas morning, Serbian maidens rise early and go to the village fountain, there to fetch water for making the Christmas loaf. Nor do they forget to wish the fountain "Happy Christmas," before throwing into it a handful of corn and a sprig of sweet basil. The first cupful of water is taken home to use in baking the symbolic loaf, which is broken at noonday by the head of the house. The *chesnitza,* as the cake-like bread is called, is usually flat and wheel-like in shape. From the hole in the center, often decorated with a wax taper or a little Christmas tree, radiate lines, like the spokes of a wheel. The *chesnitza* is divided into as many portions as there are members of the family. Sometimes it contains a silver *dinar* for good luck, a stem of basil, an old purse, or other tokens emblematic of the fortune which will befall members of the family.

But since the *chesnitza* has power to predict a good year to crops and animals, as well as good fortune to men, it sometimes is thrown over the horn of the "eldest ox." If the ox tosses off the *chesnitza,* (as is almost certain he will), it is a sign that the corn will prosper and the flocks increase.

At Christmas time, say the Slavs, every living thing must share in the bounty of the holiday feast. To cattle and oxen are given wheat and corn and a share of their master's feast. For the humble creature which witnessed Christ's birth always must be treated with consideration.

Nor are offerings of food denied to the elements. The fire must have its gift, lest it lap hungrily at the dry thatch on the roof; the winds, lest they mow down the grain; the earth, lest it withhold its increase, and above all, the brook, lest it refuse its water to men and beasts. To the brook, therefore, the peasant carries bread and salt, a sacrificial offering, God's gift to man, and man's gift to the mysterious forces of the universe.

Infant Mortality in the United States

Of every 1,000 babies born alive in the United States 64 died in 1930 before completing the first year of life, according to provisional figures of the United States Census Bureau for the birth-registration area of the United States exclusive of Utah. This area now covers all of continental United States with the exception of South Dakota and Texas and includes approximately 95 per cent of the country's population. This American infant-death rate, while nearly twice that of New Zealand—which holds the world's record for a low infant mortality rate—is lower than in previous years. It represents a decrease of 36 per 1,000 since 1915, the year in which the birth registration area was established in this country. At that time the rate for the 10 states which kept accurate birth records was 100 per 1,000 live births. Similar improvements in the prevention of deaths among babies are indicated by official reports from many foreign countries, eight of which had lower infant mortality rates than the United States in 1928, the latest year in which figures for at least 26 countries were available.

Compared with previous centuries, the decrease in infant mortality rates all over the world is strikingly illustrated in a recently published book by Dr. Ernest Caulfield entitled "The Infant Welfare Movement in the Eighteenth Century." In it he calls attention to the impressive decrease in the deaths of young children in England. Official English reports of deaths for the 20-year period following 1730 are quoted as indicating that 600 out of every 1,000 babies died before the completion of their second year of life, and 750 died before the completion of their fifth year. For the 20-year period around the beginning of the nineteenth century these deaths had been reduced so that of every 1,000 children born, 300 died before they reached the age of 2 years and 410 children before the age of 5 years—a reduction which a statistician of the early nineteenth century characterized as "one of the most remarkable phenomena of modern times."—*U. S. Children's Bureau, Washington, D. C.*

Foods Classes for One-Hour Periods

(Continued from page 84)

onstrate the best sanitary method of testing for flavors: With a mixing spoon, take a small amount of food from the pan, pour it into a teaspoon, and taste. This procedure may be shown immediately following the demonstration of kitchen measurements, while spoons, saucepans, utility plates, and other regular equipment hold special attention.

It is wise to start the foods course with the preparation of a beverage and to make of this first meeting a combination social and lesson period. Plan to serve either cocoa or iced lemonade, depending upon the season. I have included the two recipes on the first lesson sheet; of course, one beverage only is to be prepared for this occasion.

It is important to time the lessons in relation to the holidays: The lesson on cookies has an added interest when it comes just before Hallowe'en; use cutters in shapes of witches, cats, and half-moons. The lesson on Dixie Punch fits this season, too—or might come sometime previous to Valentine's Day. Candy for Christmas! Plan for the cake lesson to come before Easter Vacation. Such forethought gives the girls something to anticipate and to talk over outside of class. It is quite evident that these gala lessons form a reward for the less exciting periods and give to the entire course distinctive appeal.

When I carried out this program in a private school, I noticed that the girls used their foods class recipes in preparing cakes, cookies, and candy at home for class parties at the school. And one of the classes arranged a food sale; they elected their own chairmen of committees, worked under group leadership and, with suggestions from their homeroom teacher, decorated attractive booths. The result was a most successful example of cooperation. And the sale gave the right kind of publicity. Interested parents and relatives saw positive proof of accomplishment.

The idea of the food sale was original with the class. It had come up at a class meeting and not during a laboratory period. The girls placed their ideas before me and asked for further suggestions. I cooperated by giving the jelly making lesson an early place in the program so that glasses of mint, grape, and apple jelly, together with jars of orange marmalade, might be used as a background. Sunlight shining through the various colors gave a pleasing effect to the display.

I am not in favor of instructor-planned food sales where all the responsibility of soliciting and generally managing the affair is left with the teacher. A student-planned sale is quite another proposition and much to be encouraged, in my opinion.

Note: The printed lesson sheets and text Mrs. Sutcliffe used in her course are available for teachers who wish them. On account of the cost of printing and mailing them, there is a nominal charge of fifty cents for the set of thirty lessons. These may be obtained by sending that amount to Practical Home Economics, 468 Fourth Avenue, New York City.

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A Spanish lady of sixteenth century high society wrote to her daughter cautioning her against too frequent ablutions. Her letter, as relayed by Lady Marion Phillimore in *The National Review,* London, follows:

"It is permissible, and even advisable, my dear daughter, to wash your face once or even twice during a week. To do so is said to be cooling and refreshing, and is less questionably desirable at times for the purpose of removing marks and stains which, if neglected, might make it doubtful whether your friends would always succeed in recognizing you. But to wash more often than once in every four days would be to expose yourself to the evil tongue of the malicious. It would very naturally be said that you did it for the purpose of making yourself attractive to men, and I confess that I, your own mother, might be at a loss to know in what manner to defend you from the charge."—*The Cleanliness Journal.*

Changing Needs in Furnishing

(Continued from page 90)

tors are every bit as important as exposure. The style and material for curtains should be determined fully as much by the architecture of the house itself and the outside appearance of the curtained windows as by a consideration of interior furnishings. Practically every one living in small quarters wants to know how to make rooms appear larger and less crowded with furniture; a few definite rules or tricks which will give results of elegance and space; and suggestions as to types of furniture which will help to produce these results.

The following problems are suggested for consideration with style the keynote of all.

The room for the business girl, a room which must be her home in every sense.

The tiny apartment for the business woman.

The small home or apartment for newly-weds.

The bungalow or house for the growing family.

The more pretentious house.

These are all topics of present-day importance which should find a place in house furnishing courses.

Foods Projects

(Continued from page 92)

she stopped and asked what was wrong. They told her that they didn't know where they belonged. The people in Fruitalea wouldn't claim them and those in Vegetable Court turned up their noses and wouldn't recognize them. They asked where she was going. She said to Sweet Town.

"Oh, don't go there," they said, "if you go any place go to Meat City or Dairyvale. The people in Sweet Town are all crooked. They tempt you to do things you wouldn't do ordinarily. Don't oh, don't go there!"

So Alice wandered on. At a fork in the road were two signs. The one on the left said Sweet Town. The one on the right said Meat City and Dairyvale; Twin Cities. She took the road on the right, deciding to take the advice of the outlaws.

DAIRYVALE AND MEAT CITY; TWIN CITIES

On and on she walked until she could finally see the buildings of a city. As she walked on she came to Meat City. There she saw stock walking around on hind legs. Mr. Sheep and Mrs. Cow had a lot to say. They were big business men (and women). Mr. Pig was prominent, also Mrs. Cow. She met Mrs. Hen and her son Mr. Egg who was visiting from a nearby vicinity. She did not stay long in Meat City but went on to Dairyvale where Alice met Mr. Butter, Mr. Cheese, Mr. Milk and Mr. Cream. Mr. Cream said that some people whipped and whipped him but he never cried though he did turn to butter if they whipped too long. They ran a dairy farm and made much money. They were quite rich and very many people liked them. Alice stayed just long enough to go around the farm, and hear how the different products were made out of milk and cream. She also saw two Mr. Herrings who were cousins who hadn't seen each other for a long time and now hardly recognized each other. They told of their experiences, one had been dried in the hot sun and the other had been frozen.

She had promised Mr. Apple to visit there again so she left. Soon she was back in Fruitalea where she met Mr. Apple and went around the store there. When she had finished looking around she sat down in a chair and listened to Mr. Apple tell all about the management of it.

She didn't close her eyes (at least she thought not) but soon she opened them at the sound of a voice calling her name. The voice was faint but familiar. When she opened her eyes all at once the foods jumped onto the counter and grew small again. The people who had been on the counter jumped off and went busily running or jumping around. Who had called her name? There it was again. It was near her this time. Right beside her the voice said, "Alice, hurry up or we will miss our train." It was her mother.

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